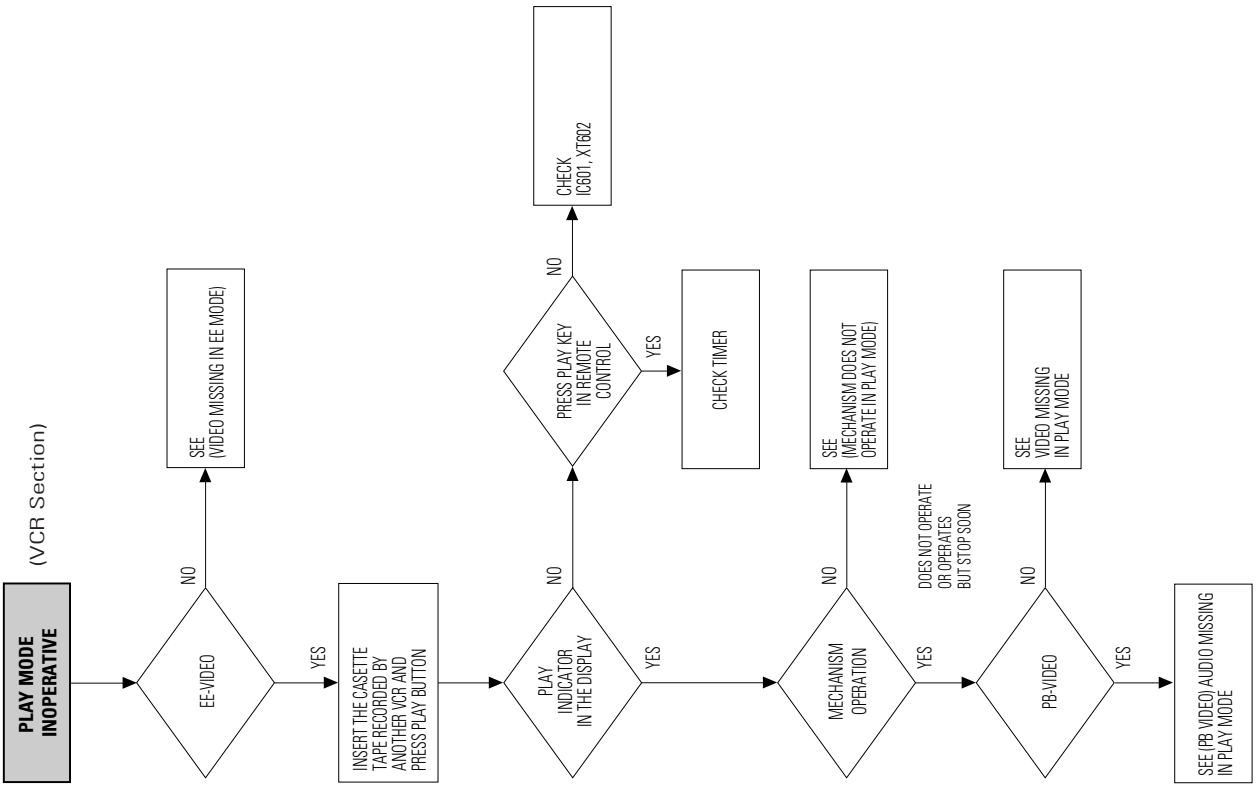
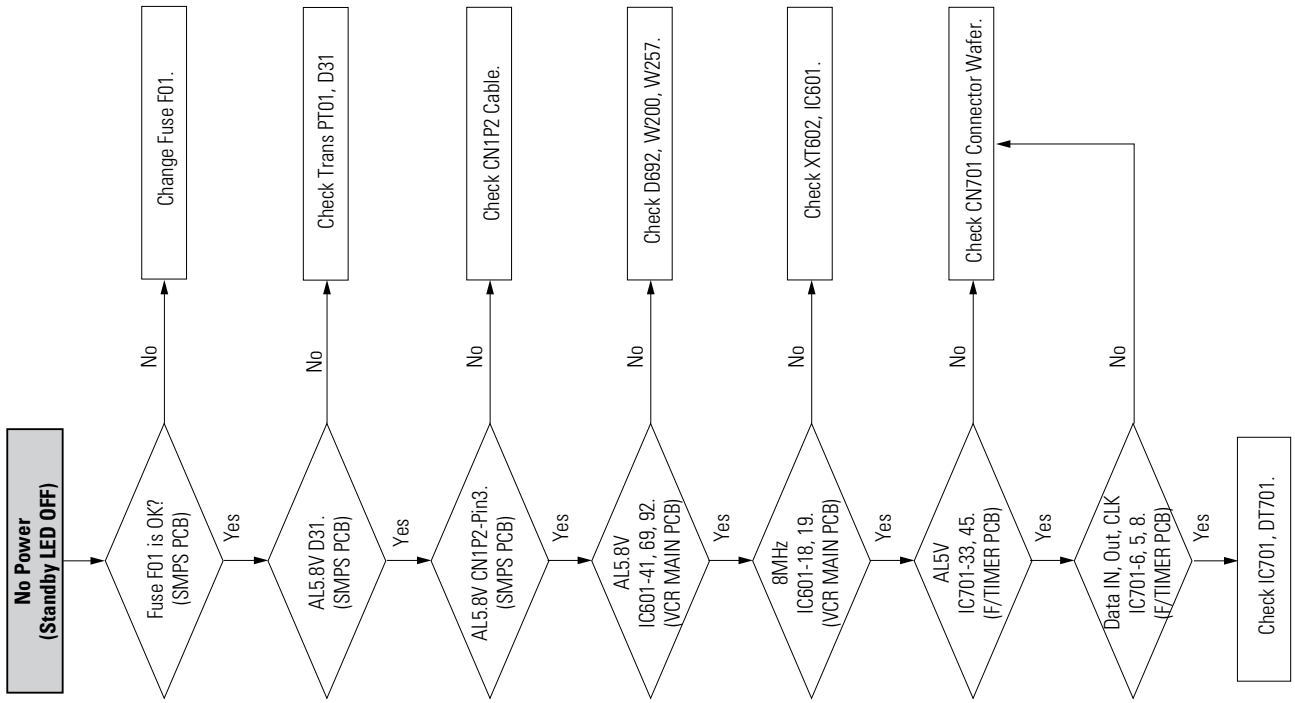
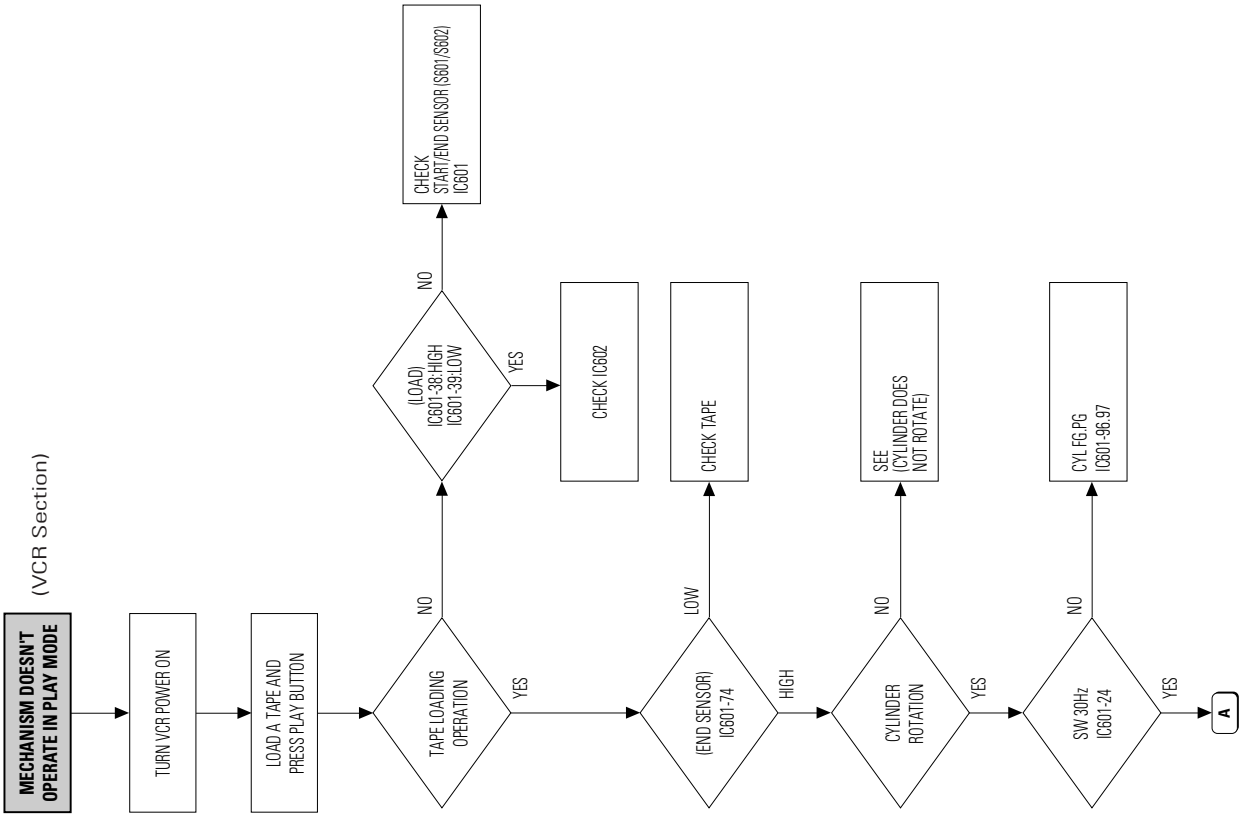
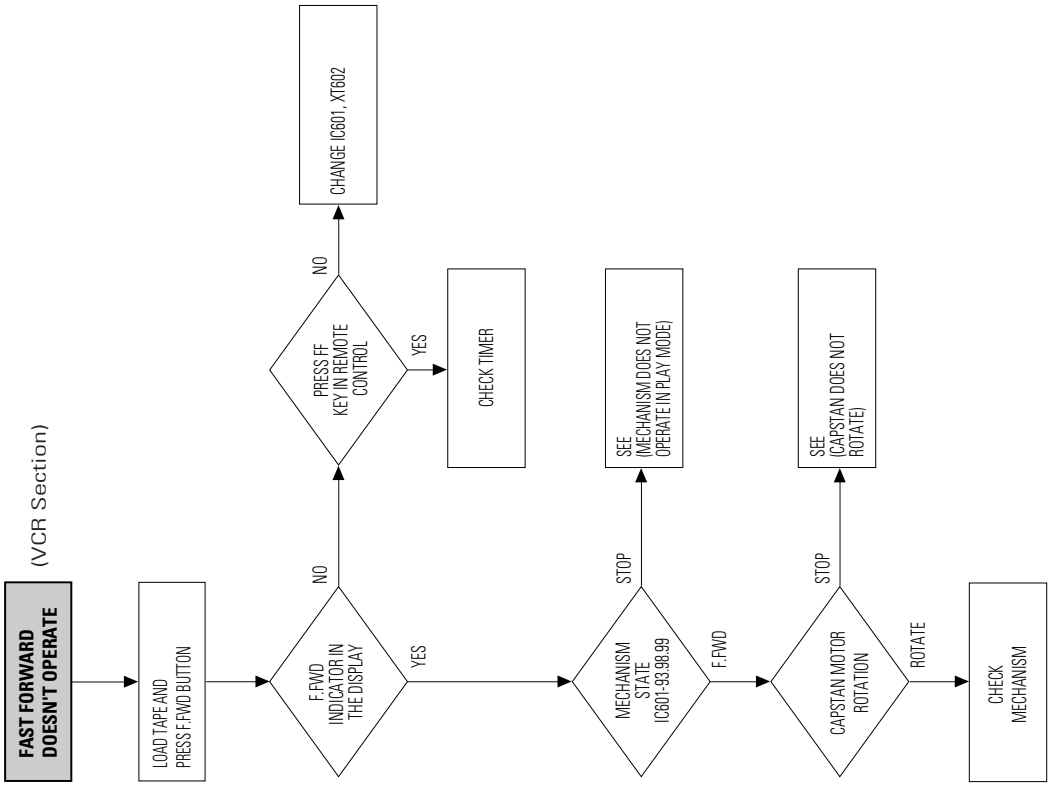
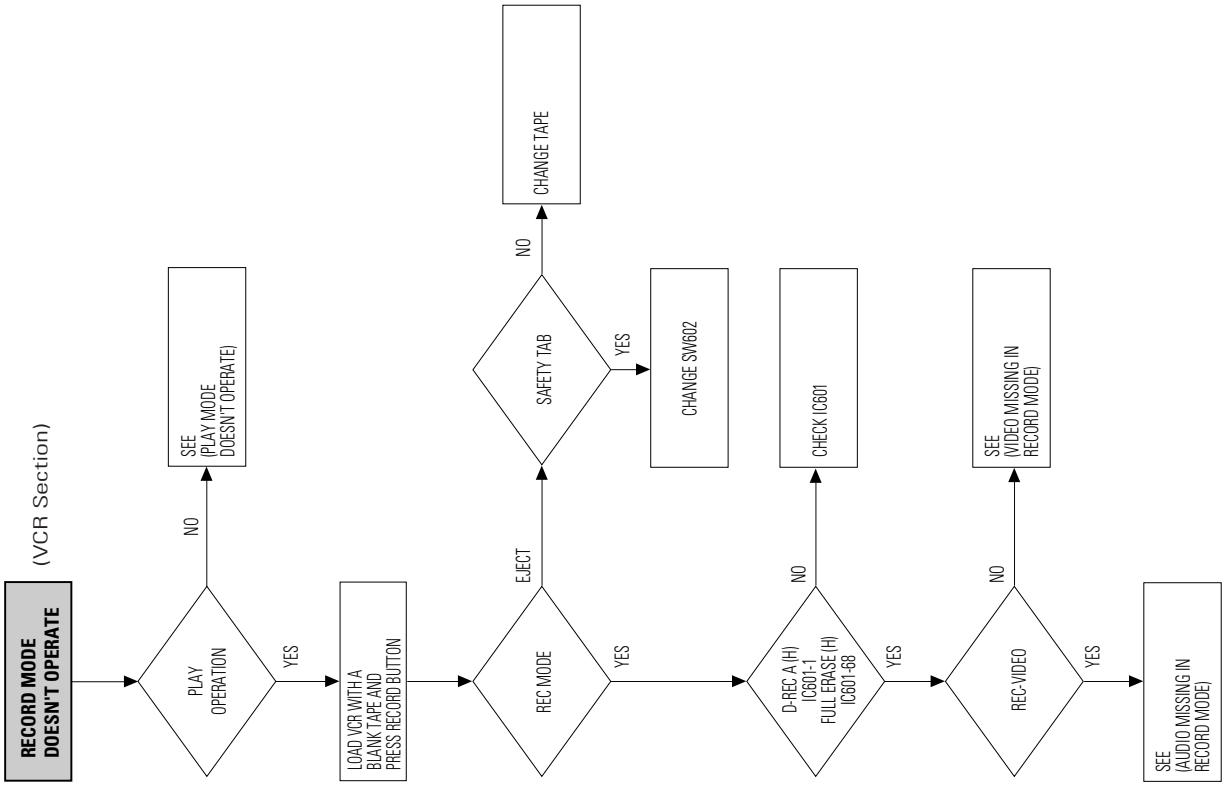
5. Troubleshooting

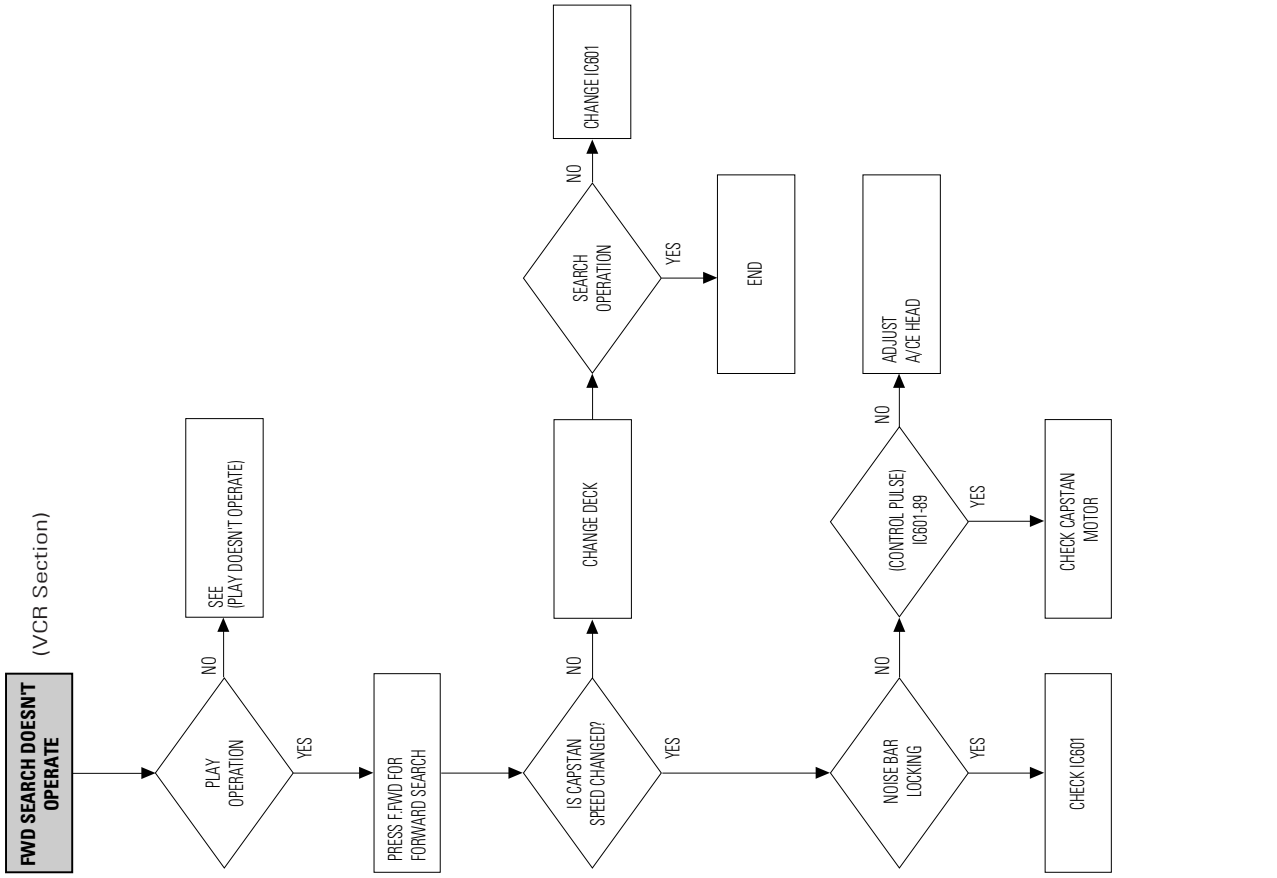


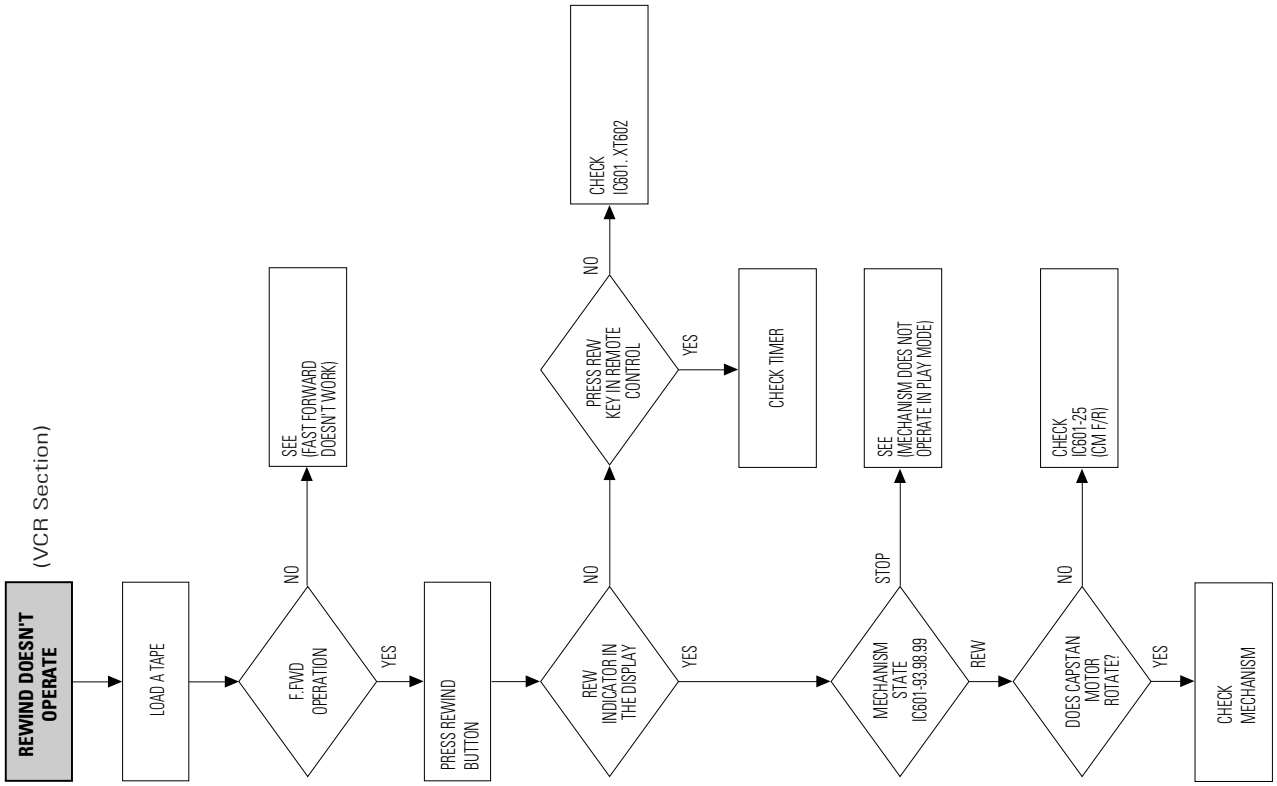


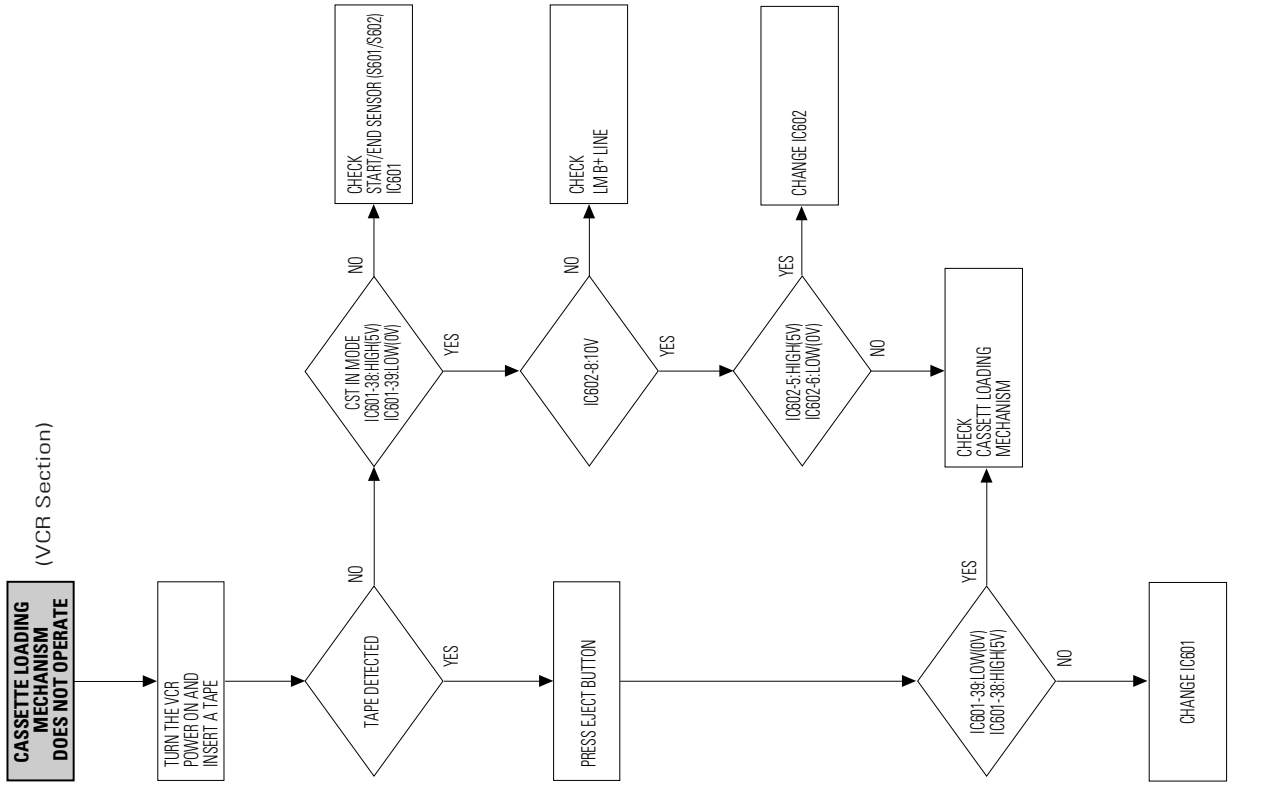

MECHANISM DOESN'T OPERATE IN PLAY MODE
(VCR Section)
TURN VCR POWER ON
LOAD A TAPE AND PRESS PLAY BUTTON
TAPE LOADING OPERATION
NO
YES
(LOAD) IC601-38:HIGH IC601-39:LOW
NO
YES
CHECK START/END SENSOR (S601/S602) IC601
CHECK IC602
(END SENSOR) IC601-74
LOW
HIGH
CHECK TAPE
CYLINDER ROTATION
NO
YES
SEE (CYLINDER DOES NOT ROTATE)
SW 30Hz IC601-24
NO
YES
CYL FG, PG IC601-96,97
A
A
CAPSTAN ROTATION
NO
YES
SEE (CAPSTAN DOES NOT ROTATE)
(S.T REEL) IC601-98,99
DC
PULSE
TAKE UP REEL SENSOR SUPPLY REEL SENSOR (PT601, PT602)
PROG.SW STATE IC601-76, 77, 78
STOP MODE
YES
CHECK LOADING MOTOR MECHANISM OR SW601
CHANGE IC601

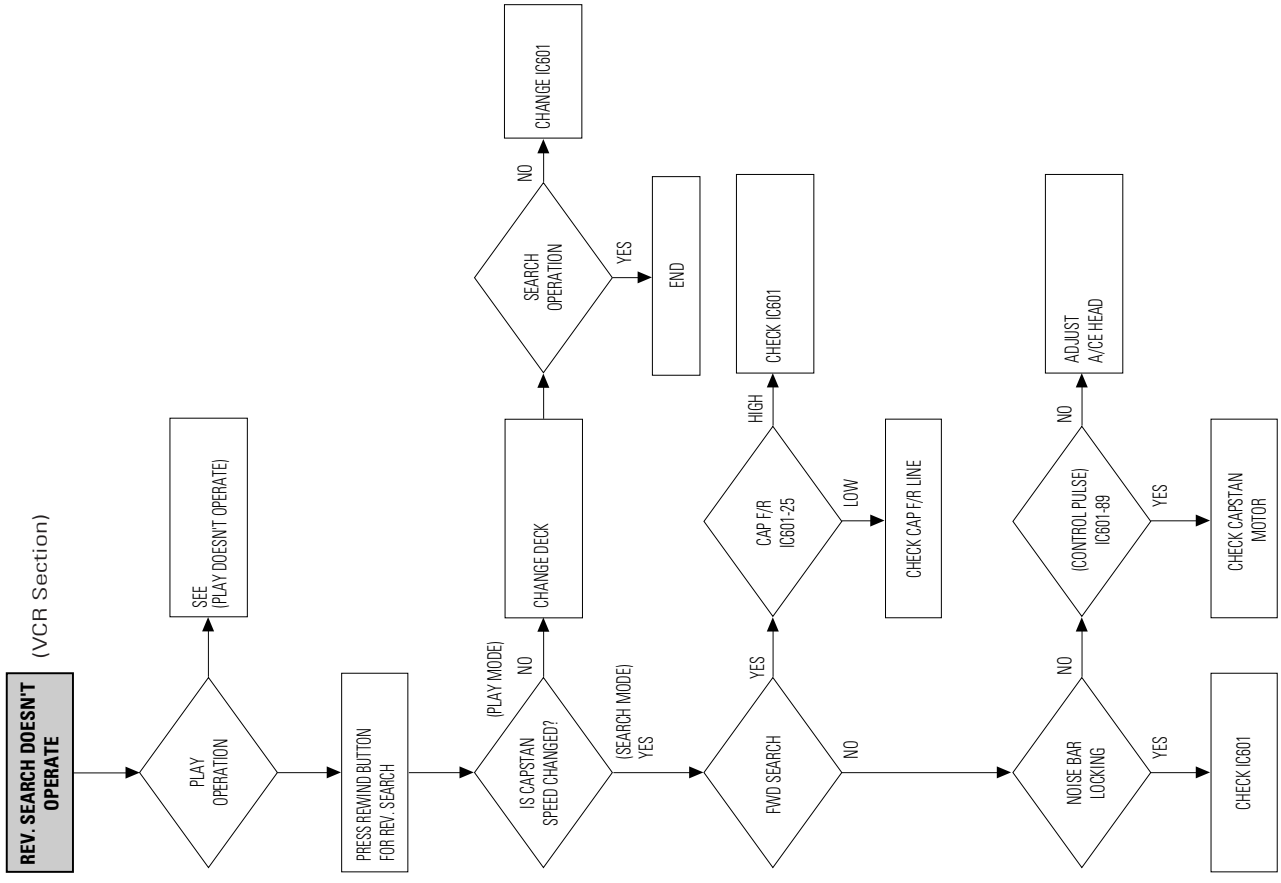

FAST FORWARD DOESN'T OPERATE
(VCR Section)
LOAD TAPE AND PRESS F.FWD BUTTON
F.FWD INDICATOR IN THE DISPLAY
NO
YES
PRESS FF KEY IN REMOTE CONTROL
NO
YES
CHANGE IC601, XT602
CHECK TIMER
MECHANISM STATE IC601-93.98.99
STOP
F.FWD
SEE (MECHANISM DOES NOT OPERATE IN PLAY MODE)
CAPSTAN MOTOR ROTATION
STOP
ROTATE
SEE (CAPSTAN DOES NOT ROTATE)
CHECK MECHANISM

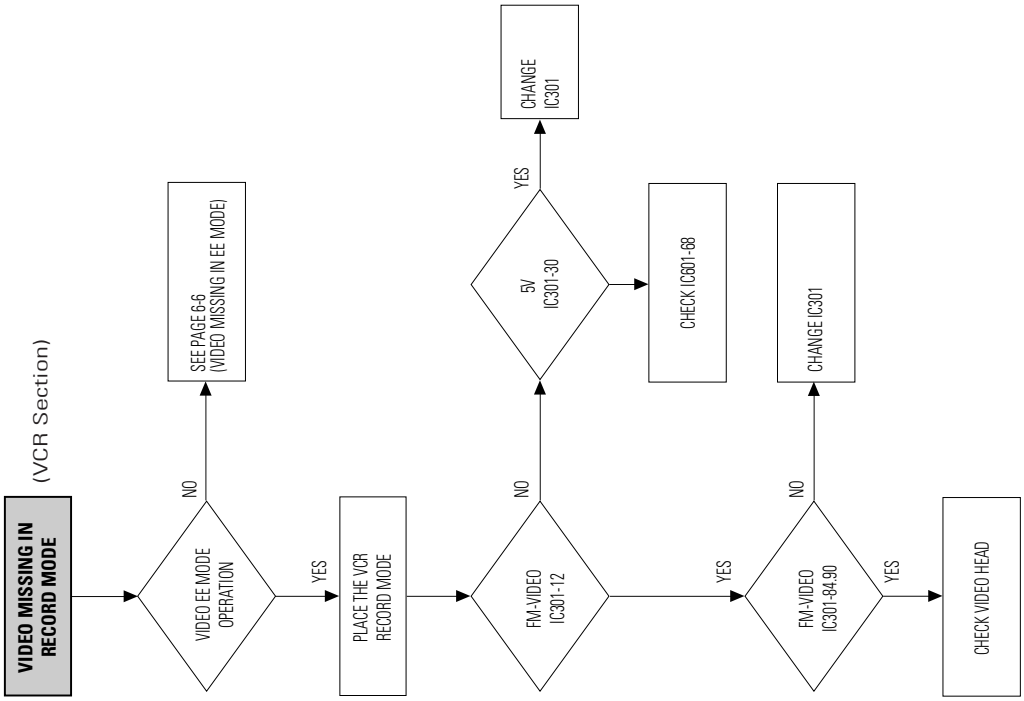

RECORD MODE DOESN'T OPERATE
(VCR Section)
PLAY OPERATION
NO
YES
SEE (PLAY MODE DOESN'T OPERATE)
LOAD VCR WITH A BLANK TAPE AND PRESS RECORD BUTTON
REC MODE
EJECT
YES
SAFETY TAB
NO
YES
CHANGE SW602
CHANGE TAPE
D-REC A (H) IC601-1
FULL ERASE (H) IC601-68
NO
YES
CHECK IC601
REC-VIDEO
NO
YES
SEE (VIDEO MISSING IN RECORD MODE)
SEE (AUDIO MISSING IN RECORD MODE)

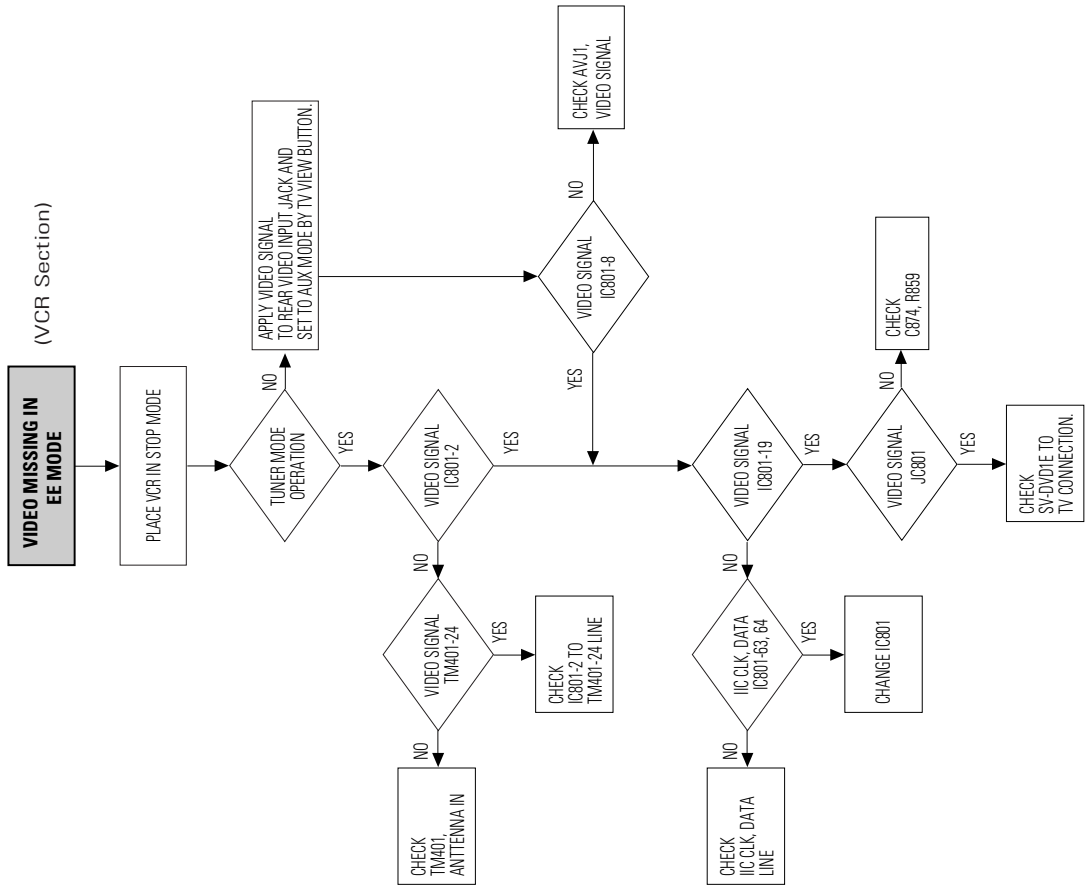

FWD SEARCH DOESN'T OPERATE
(VCR Section)
PLAY OPERATION
NO
SEE (PLAY DOESN'T OPERATE)
YES
PRESS F.FWD FOR FORWARD SEARCH
IS CAPSTAN SPEED CHANGED?
NO
CHANGE DECK
YES
SEARCH OPERATION
NO
CHANGE IC601
YES
END
NOISE BAR LOCKING
NO
(CONTROL PULSE) IC601-89
NO
ADJUST A/CE HEAD
YES
CHECK CAPSTAN MOTOR
YES
CHECK IC601

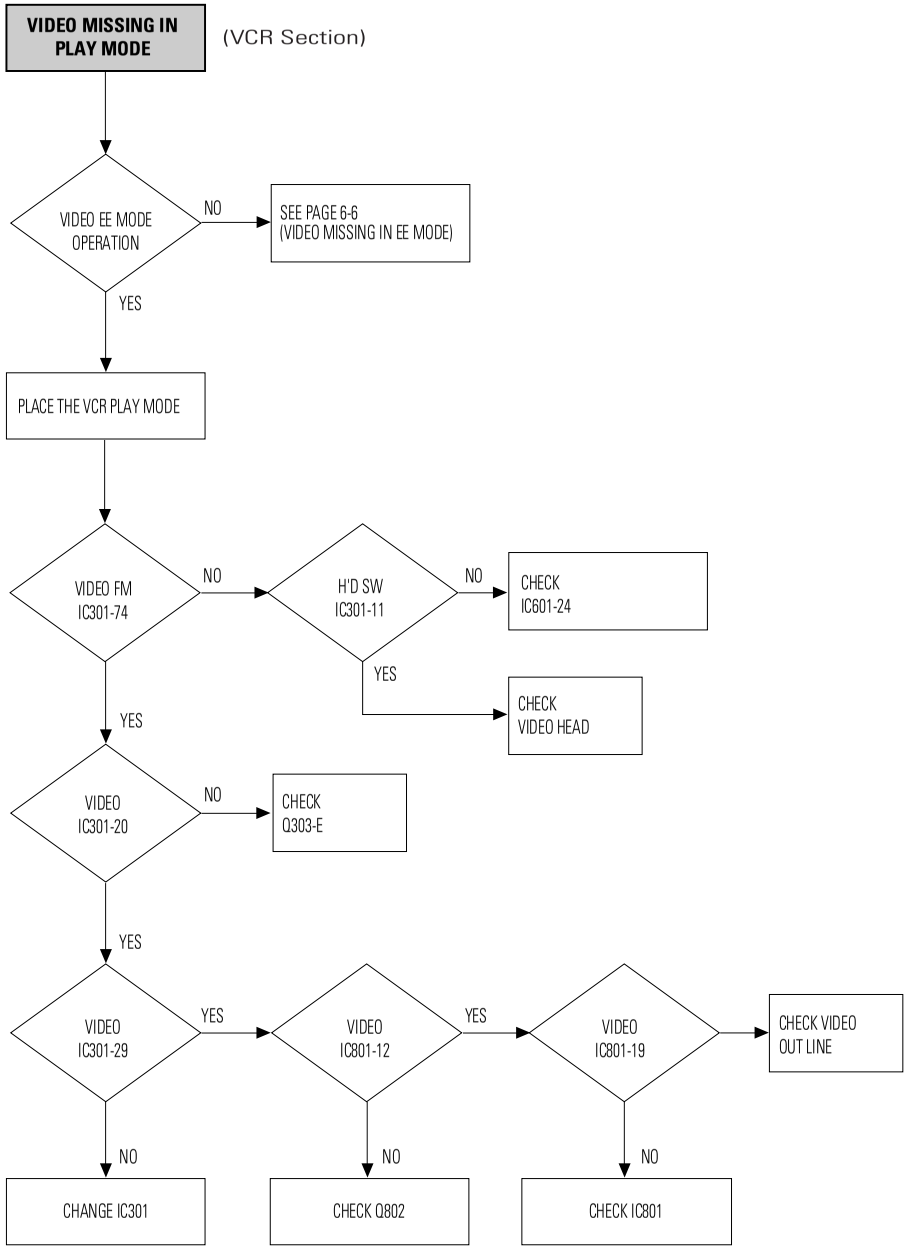

REWIND DOESN'T OPERATE
(VCR Section)
LOAD A TAPE
F.FWD OPERATION
NO
SEE (FAST FORWARD DOESN'T WORK)
YES
PRESS REWIND BUTTON
REW INDICATOR IN THE DISPLAY
NO
CHECK IC601: XT602
YES
PRESS REW KEY IN REMOTE CONTROL
NO
CHECK TIMER
YES
MECHANISM STATE IC601-93.98.99
STOP
SEE (MECHANISM DOES NOT OPERATE IN PLAY MODE)
REW
DOES CAPSTAN MOTOR ROTATE?
NO
CHECK (IC601-25 (CM F/R)
YES
CHECK MECHANISM

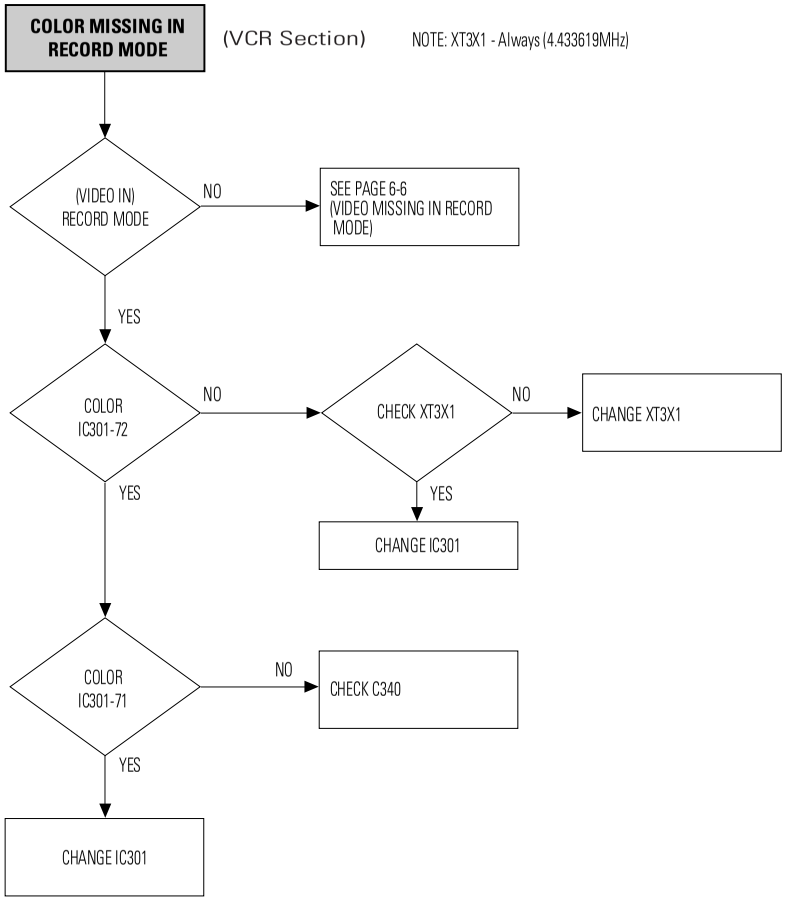

CASSETTE LOADING MECHANISM DOES NOT OPERATE
(VCR Section)
TURN THE VCR POWER ON AND INSERT A TAPE
TAPE DETECTED
NO
YES
CST IN MODE IC601-38:HIGH(5V) IC601-39:LOW(0V)
NO
YES
CHECK START/END SENSOR (S601,S602) IC601
IC602-8:10V
NO
YES
CHECK LM1B+ LINE
IC602-5:HIGH(5V) IC602-6:LOW(0V)
YES
NO
CHANGE IC602
PRESS EJECT BUTTON
IC601-39:LOW(0V) IC601-38:HIGH(5V)
YES
NO
CHECK CASSETT LOADING MECHANISM
CHANGE IC601

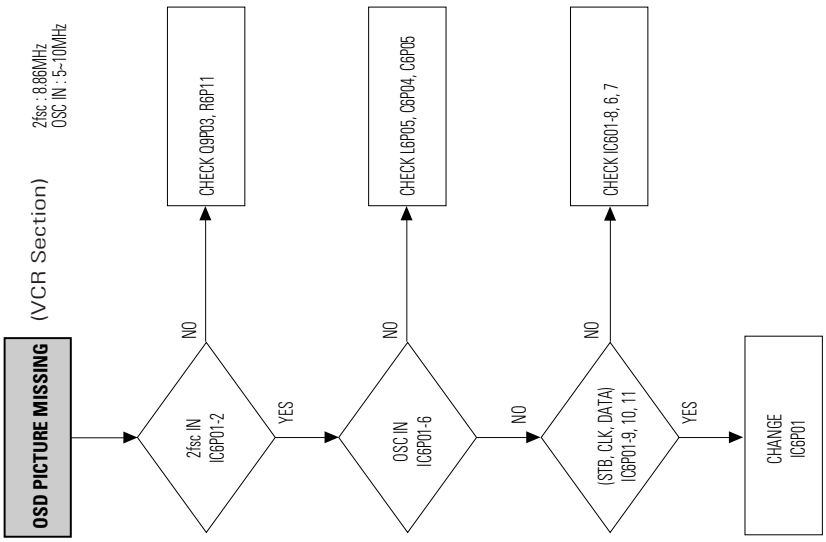

REV. SEARCH DOESN'T OPERATE
(VCR Section)
PLAY OPERATION
SEE (PLAY DOESN'T OPERATE)
PRESS REWIND BUTTON FOR REV. SEARCH
IS CAPSTAN SPEED CHANGED?
(PLAY MODE)
NO
CHANGE DECK
(SEARCH MODE)
YES
SEARCH OPERATION
NO
CHANGE IC601
YES
END
FWD SEARCH
YES
NO
CAP F/R IC601-25
HIGH
CHECK IC601
LOW
CHECK CAP F/R LINE
NOISE BAR LOCKING
NO
YES
CHECK IC601
(CONTROL PULSE) IC601-89
NO
ADJUST A/CE HEAD
YES
CHECK CAPSTAN MOTOR

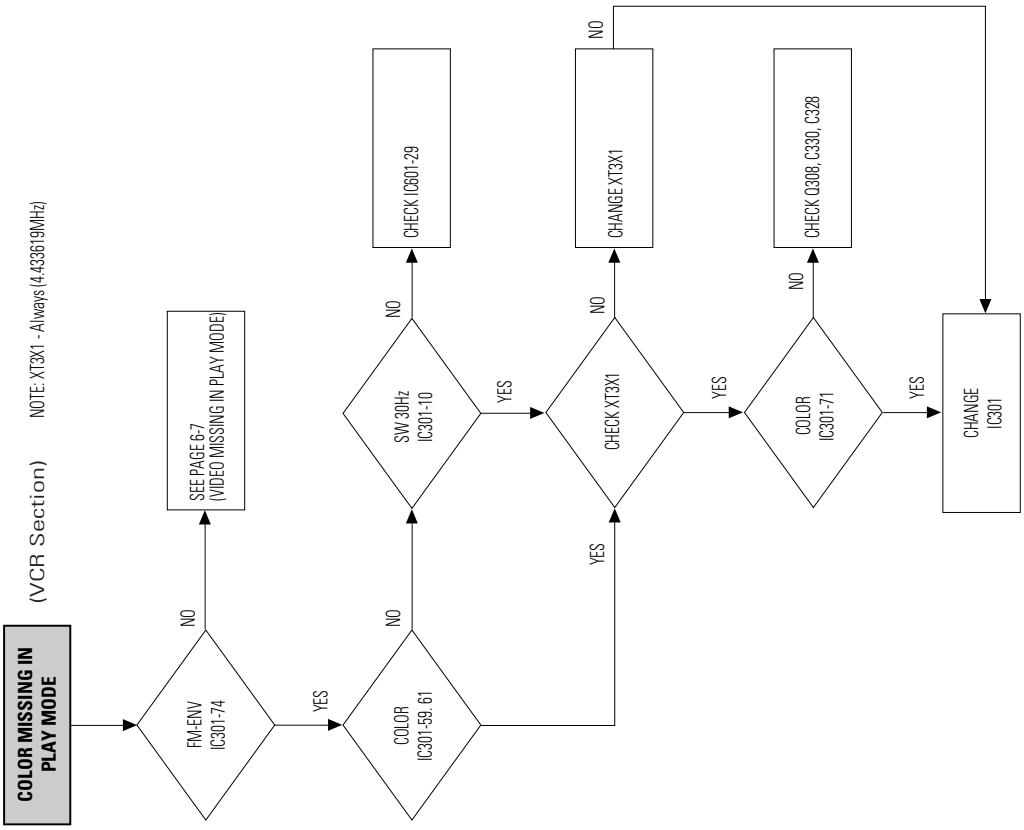

VIDEO MISSING IN RECORD MODE
(VCR Section)
VIDEO EE MODE OPERATION
NO
SEE PAGE 6-6 (VIDEO MISSING IN EE MODE)
YES
PLACE THE VCR RECORD MODE
FM-VIDEO IC301-12
NO
5V IC301-30
YES
CHANGE IC301
CHECK IC801-68
YES
FM-VIDEO IC301-84,90
NO
CHANGE IC301
YES
CHECK VIDEO HEAD

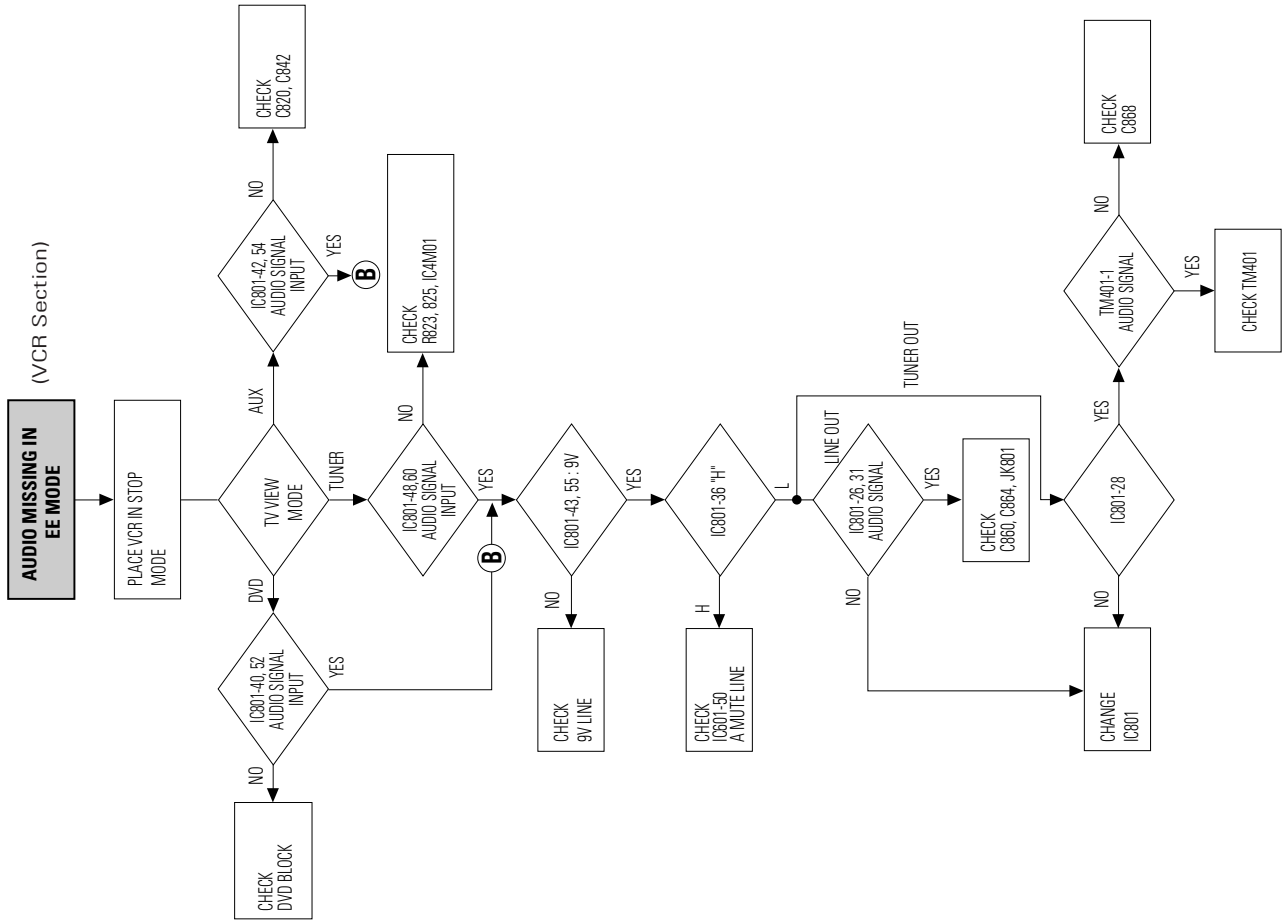

VIDEO MISSING IN EE MODE
(VCR Section)
PLACE VCR IN STOP MODE
TUNER MODE OPERATION
NO
APPLY VIDEO SIGNAL TO REAR VIDEO INPUT JACK AND SET TO AUX MODE BY TV VIEW BUTTON.
YES
VIDEO SIGNAL IC801-2
NO
VIDEO SIGNAL TM401-24
NO
CHECK TM401, ANTTENNA IN
YES
CHECK IC801-2 TO TM401-24 LINE
YES
VIDEO SIGNAL IC801-8
NO
CHECK AVJ1, VIDEO SIGNAL
YES
VIDEO SIGNAL IC801-19
NO
IIC CLK, DATA IC801-63, 64
NO
CHECK IIC CLK, DATA LINE
YES
CHANGE IC801
YES
VIDEO SIGNAL JC801
NO
CHECK C874, R859
YES
CHECK SV-DVDIE TO TV CONNECTION.

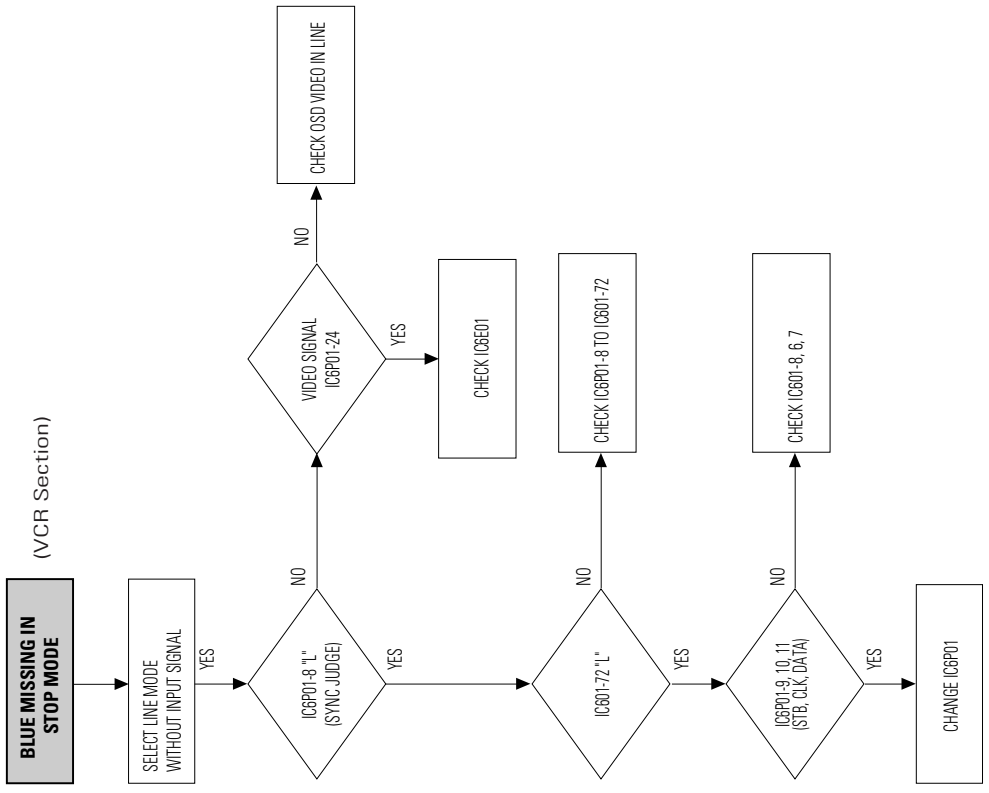

VIDEO MISSING IN PLAY MODE
(VCR Section)
VIDEO EE MODE OPERATION
NO
SEE PAGE 6-6 (VIDEO MISSING IN EE MODE)
YES
PLACE THE VCR PLAY MODE
VIDEO FM IC301-74
NO
H'D SW IC301-11
NO
CHECK IC601-24
YES
CHECK VIDEO HEAD
YES
VIDEO IC301-20
NO
CHECK Q303-E
YES
VIDEO IC301-29
YES
VIDEO IC801-12
YES
VIDEO IC801-19
CHECK VIDEO OUT LINE
NO
CHANGE IC301
NO
CHECK Q802
NO
CHECK IC801

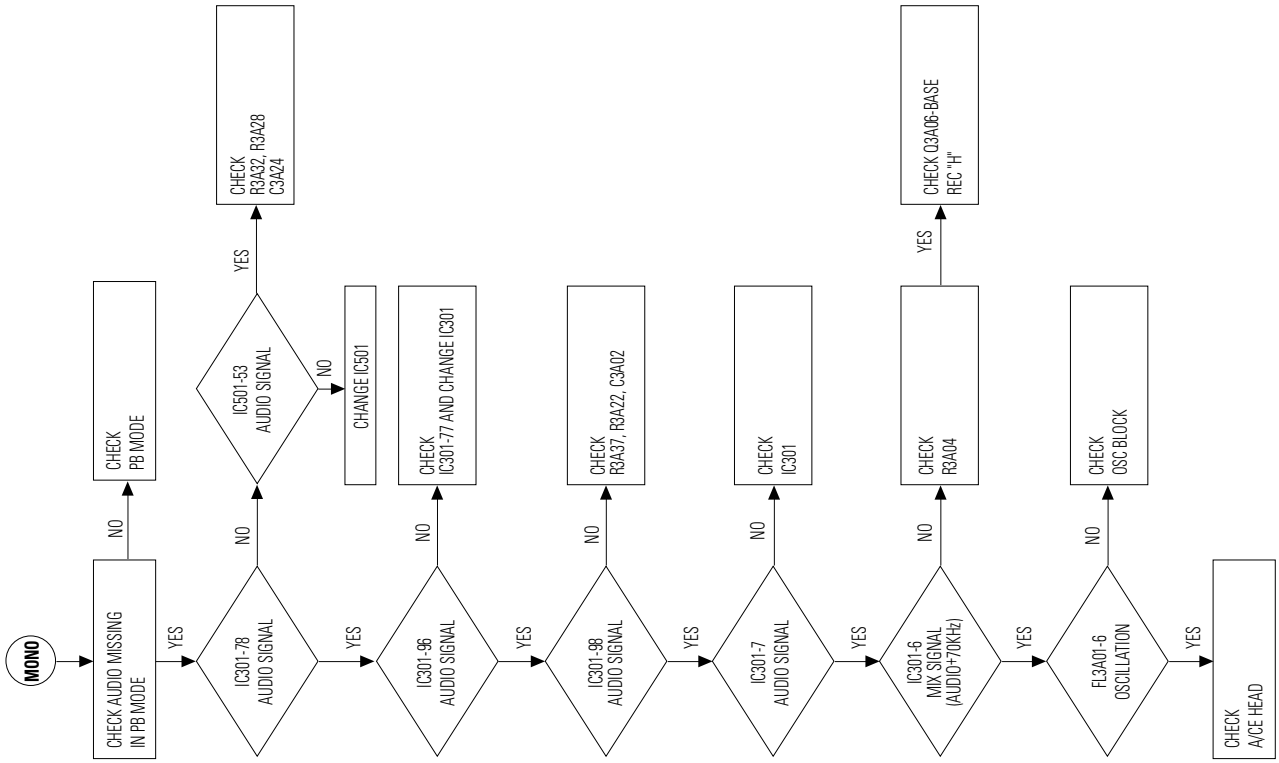

COLOR MISSING IN RECORD MODE
(VCR Section)
NOTE: XT3X1 - Always (4.433619MHz)
(VIDEO IN) RECORD MODE
NO
SEE PAGE 6-6 (VIDEO MISSING IN RECORD MODE)
YES
COLOR IC301-72
NO
CHECK XT3X1
NO
CHANGE XT3X1
YES
YES
CHANGE IC301
COLOR IC301-71
NO
CHECK C340
YES
CHANGE IC301

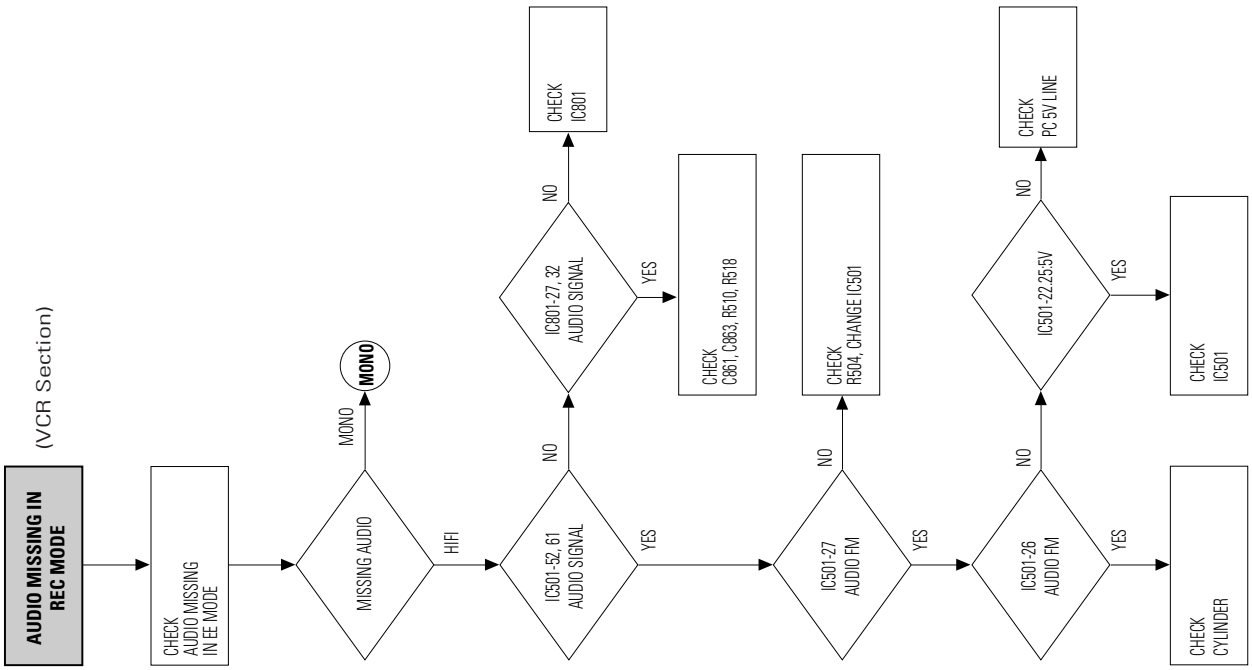

OSD PICTURE MISSING
(VCR Section)
2fsc : 8.86MHz
OSC IN : 5~10MHz
2fsc IN
IC6P01-2
NO
CHECK D9P03, R6P11
YES
OSC IN
IC6P01-6
NO
CHECK L6P05, C6P04, C6P05
NO
(STB, CLK, DATA)
IC6P01-9, 10, 11
NO
CHECK IC601-8, 6, 7
YES
CHANGE
IC6P01

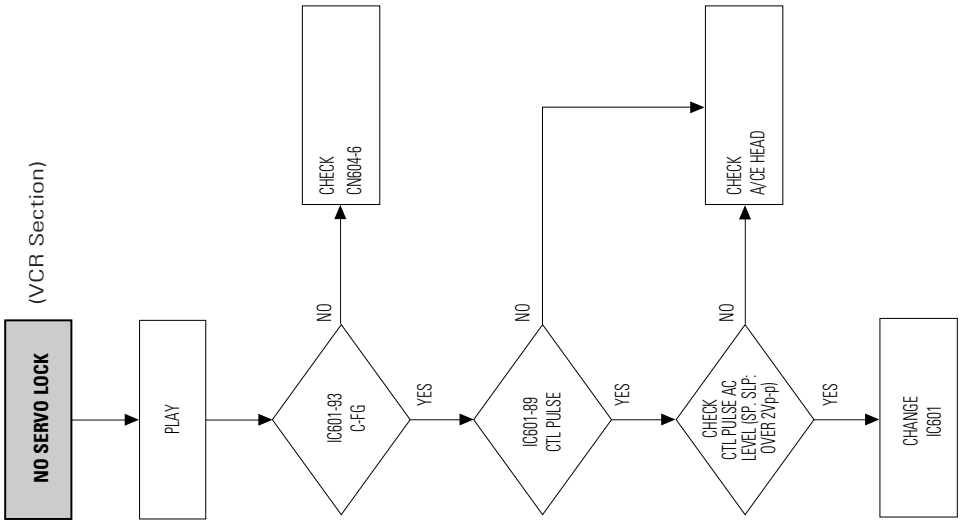

COLOR MISSING IN
PLAY MODE
(VCR Section)
NOTE: XT3X1 - Always (4.433619MHz)
FM-ENV
IC301-74
NO
SEE PAGE 6-7
(VIDEO MISSING IN PLAY MODE)
YES
COLOR
IC301-59, 61
NO
CHECK IC601-29
YES
SW 30Hz
IC301-10
NO
CHANGE XT3X1
YES
CHECK XT3X1
NO
CHECK Q308, C330, C328
YES
COLOR
IC301-71
NO
CHANGE
IC301
YES

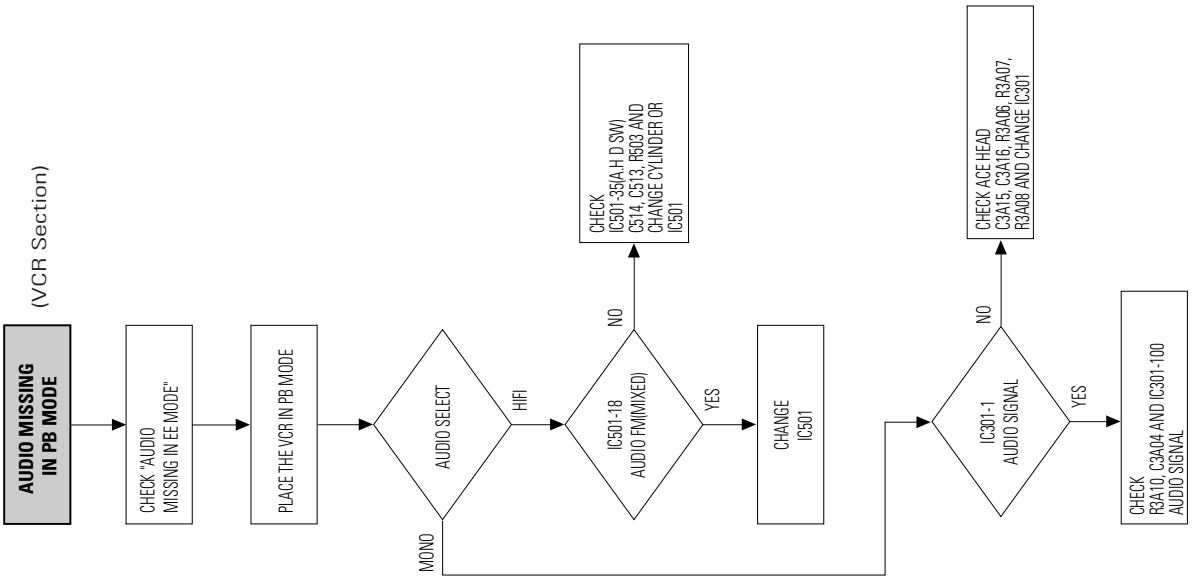

AUDIO MISSING IN EE MODE
(VCR Section)
PLACE VCR IN STOP MODE
TV VIEW MODE
DVD
TUNER
AUX
IC801-40, 52 AUDIO SIGNAL INPUT
YES
NO
CHECK DVD BLOCK
IC801-48,60 AUDIO SIGNAL INPUT
YES
NO
B
CHECK R823, 825, IC4M01
IC801-42, 54 AUDIO SIGNAL INPUT
YES
NO
B
CHECK C820, C842
IC801-43, 55 : 9V
YES
NO
CHECK 9V LINE
IC801-36 "H"
H
L
CHECK IC601-50 A MUTE LINE
TUNER OUT
LINE OUT
IC801-26, 31 AUDIO SIGNAL
YES
NO
CHECK C860, C864, JK801
IC801-28
YES
NO
CHANGE IC801
TM401-1 AUDIO SIGNAL
YES
NO
CHECK TM401
CHECK C868

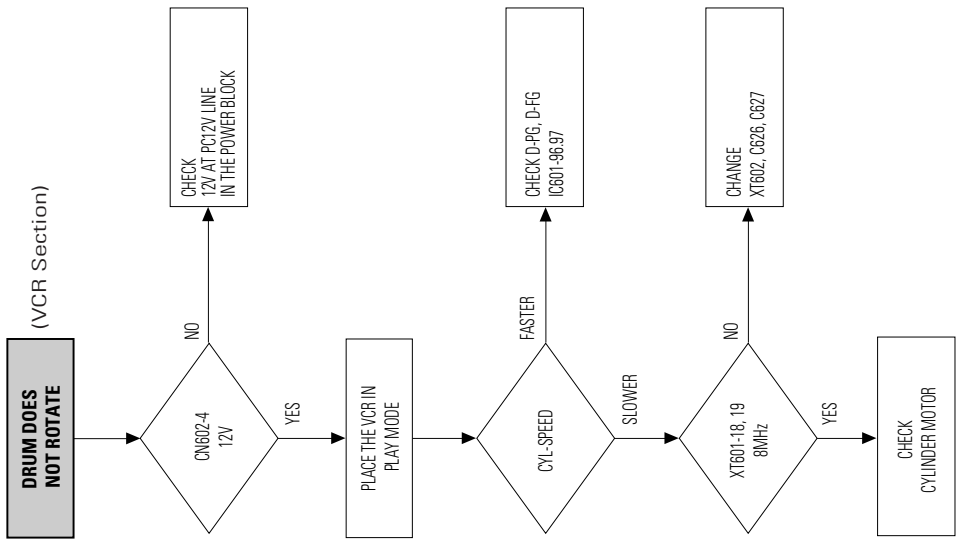

BLUE MISSING IN STOP MODE
(VCR Section)
SELECT LINE MODE WITHOUT INPUT SIGNAL
YES
IC6P01-8 "L" (SYNC JUDGE)
NO
YES
VIDEO SIGNAL IC6P01-24
NO
YES
CHECK OSD VIDEO IN LINE
CHECK IC6E01
IC601-72 "L"
NO
YES
CHECK IC6P01-8 TO IC601-72
IC6P01-9, 10, 11 (STB, CLK, DATA)
NO
YES
CHECK IC601-8, 6, 7
CHANGE IC6P01

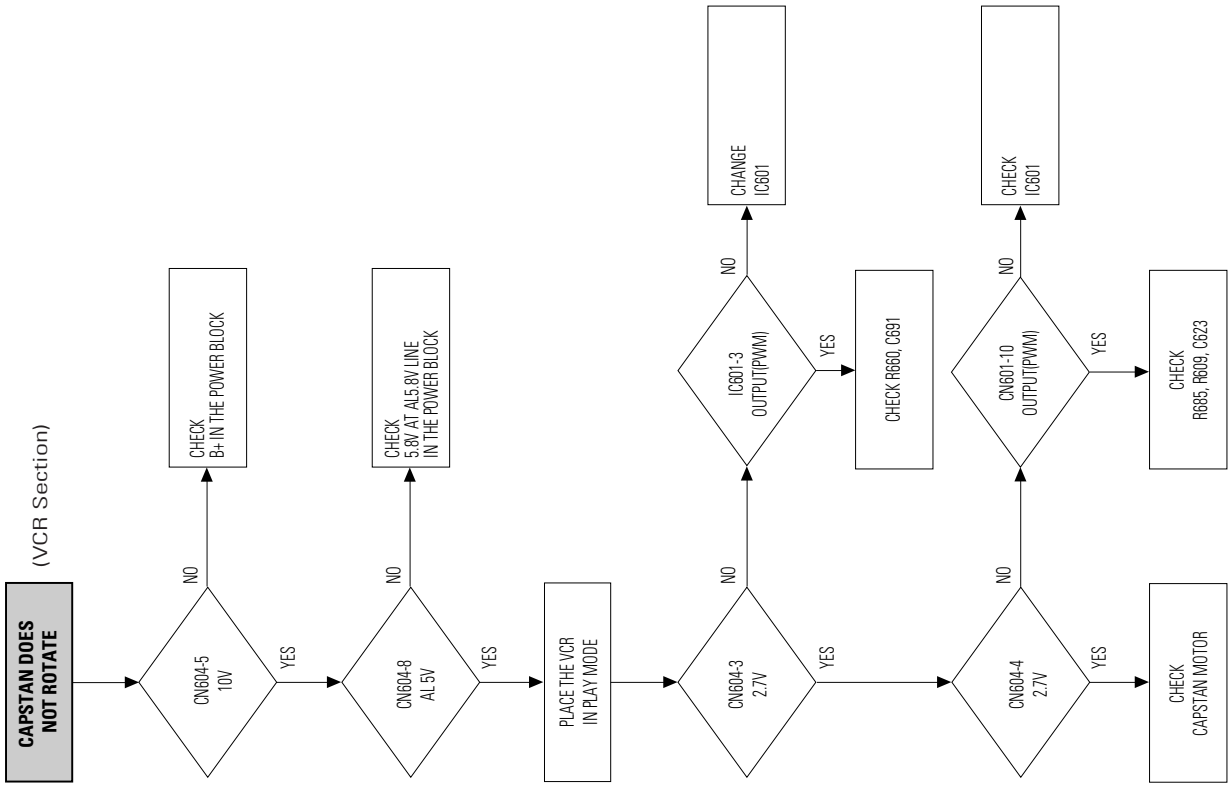

(MONO)
CHECK AUDIO MISSING IN PB MODE
NO
CHECK PB MODE
YES
IC301-78 AUDIO SIGNAL
NO
IC501-53 AUDIO SIGNAL
NO
CHANGE IC501
YES
CHECK R3A32, R3A28 C3A24
YES
IC301-96 AUDIO SIGNAL
NO
CHECK IC301-77 AND CHANGE IC301
YES
IC301-98 AUDIO SIGNAL
NO
CHECK R3A37, R3A22, C3A02
YES
IC301-7 AUDIO SIGNAL
NO
CHECK IC301
YES
IC301-6 MIX SIGNAL (AUDIO-70KHz)
NO
CHECK R3A04
YES
CHECK Q3A06-BASE REC "H"
YES
FL3A01-6 OSCILLATION
NO
CHECK OSC BLOCK
YES
CHECK A/CE HEAD

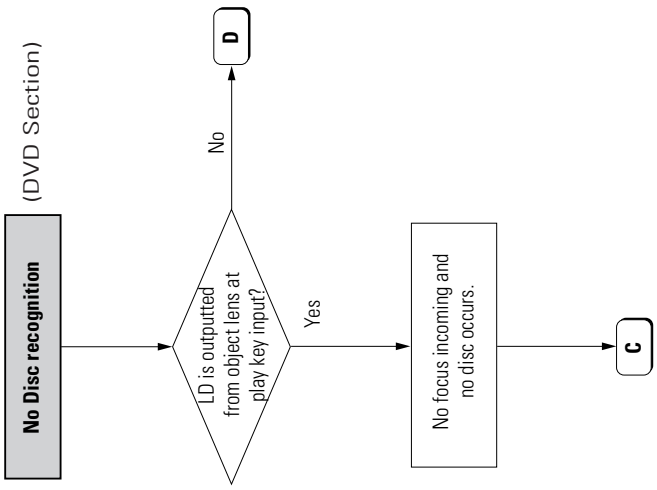

AUDIO MISSING IN REC MODE
(VCR Section)
CHECK AUDIO MISSING IN EE MODE
MISSING AUDIO
MONO
(MONO)
HIFI
IC501-52, 61 AUDIO SIGNAL
NO
IC801-27, 32 AUDIO SIGNAL
NO
CHECK IC801
YES
CHECK C861, C863, R510, R518
YES
IC501-27 AUDIO FM
NO
CHECK R504, CHANGE IC501
YES
IC501-26 AUDIO FM
NO
IC501-22,25-5V
NO
CHECK PC 5V LINE
YES
CHECK IC501
YES
CHECK CYLINDER

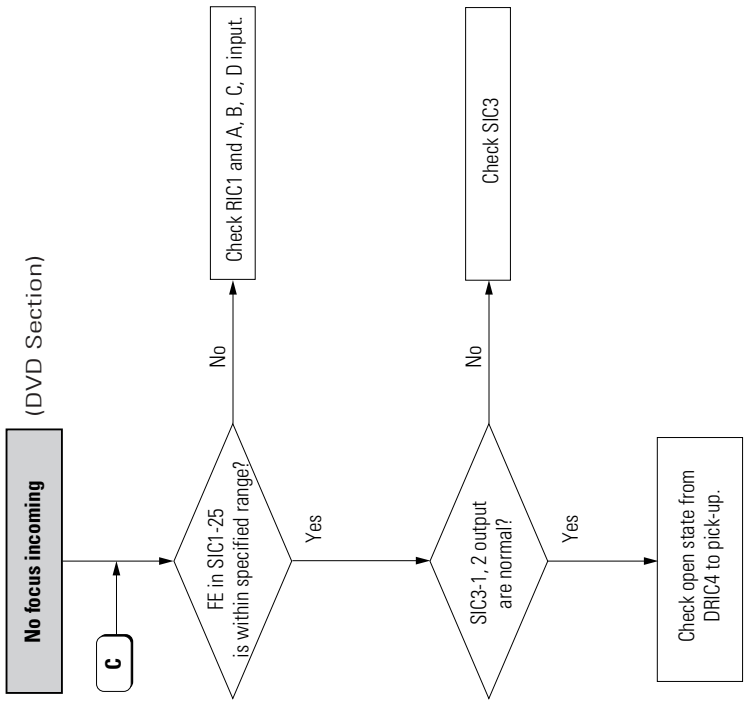

NO SERVO LOCK
(VCR Section)
PLAY
IC601-93
C-FG
NO
YES
CHECK
CN604-6
IC601-89
CTL PULSE
NO
YES
CHECK
A/CE HEAD
CHECK
CTL PULSE AC
LEVEL (SP, SLP:
OVER 2Vp-p)
NO
YES
CHANGE
IC601

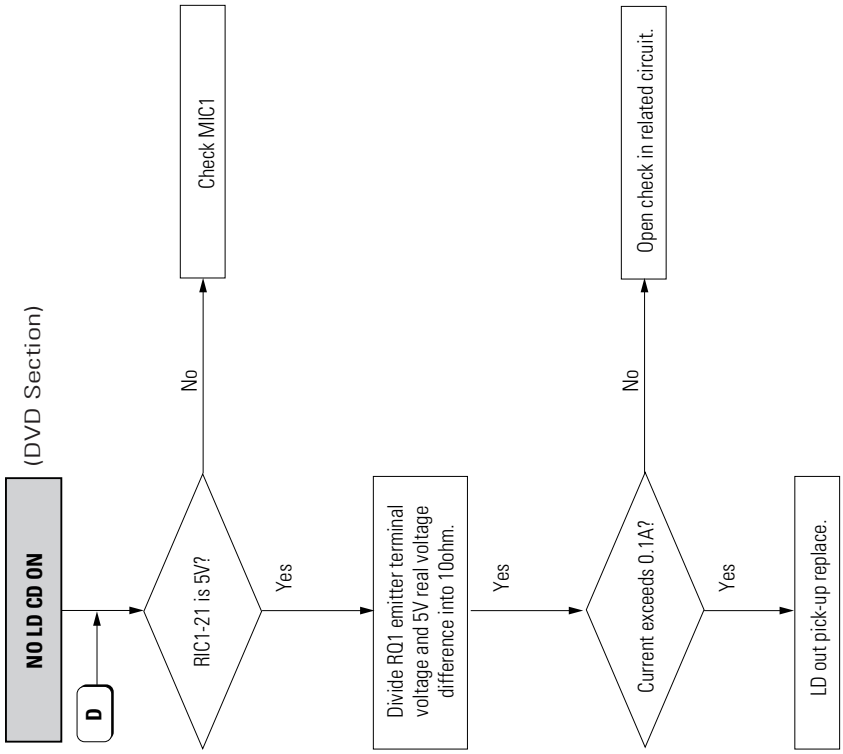

AUDIO MISSING
IN PB MODE
(VCR Section)
CHECK "AUDIO
MISSING IN EE MODE"
PLACE THE VCR IN PB MODE
AUDIO SELECT
HIFI
MONO
IC301-18
AUDIO FM(MIXED)
NO
YES
CHECK
IC501-35(A.H.D SW),
C514, C513, R603 AND
CHANGE CYLINDER OR
IC501
CHANGE
IC501
IC301-1
AUDIO SIGNAL
NO
YES
CHECK ACE HEAD
C3A15, C3A16, R3A06, R3A07,
R3A08 AND CHANGE IC301
CHECK
R3A10, C3A04 AND IC301-100
AUDIO SIGNAL

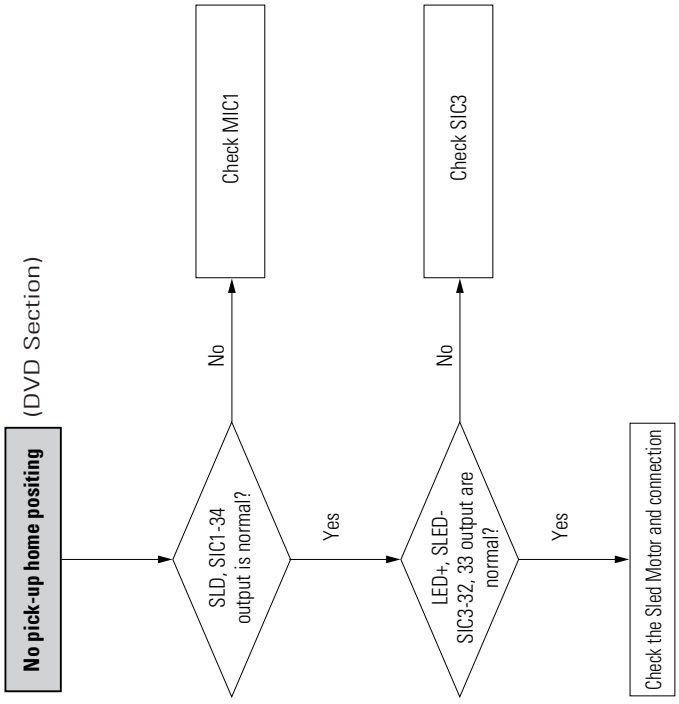

DRUM DOES NOT ROTATE
(VCR Section)
CN602-4 12V
NO
CHECK 12V AT PC12V LINE IN THE POWER BLOCK
YES
PLACE THE VCR IN PLAY MODE
CYL-SPEED
FASTER
CHECK D-PG, D-FG IC601-96,97
SLOWER
XT601-18, 19 8MHz
NO
CHANGE XT602, C626, C627
YES
CHECK CYLINDER MOTOR

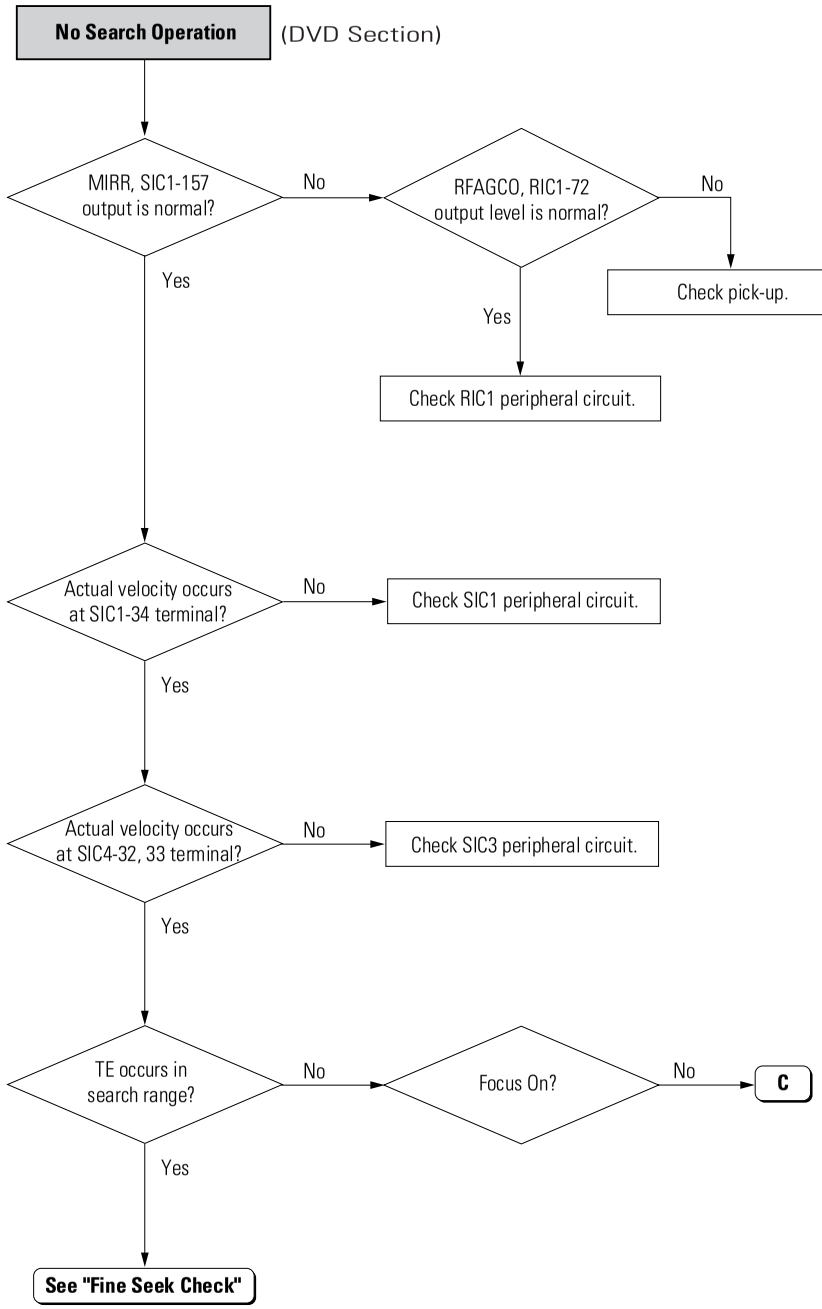

CAPSTAN DOES NOT ROTATE
(VCR Section)
CN604-5 10V
NO
CHECK B+ IN THE POWER BLOCK
YES
CN604-8 AL5V
NO
CHECK 5.8V AT AL5.8V LINE IN THE POWER BLOCK
YES
PLACE THE VCR IN PLAY MODE
CN604-3 2.7V
NO
IC601-3 OUTPUT(PWM)
NO
CHANGE IC601
YES
CHECK R660, C691
YES
CN604-4 2.7V
NO
CN601-10 OUTPUT(PWM)
NO
CHECK IC601
YES
CHECK R685, R609, C623
YES
CHECK CAPSTAN MOTOR

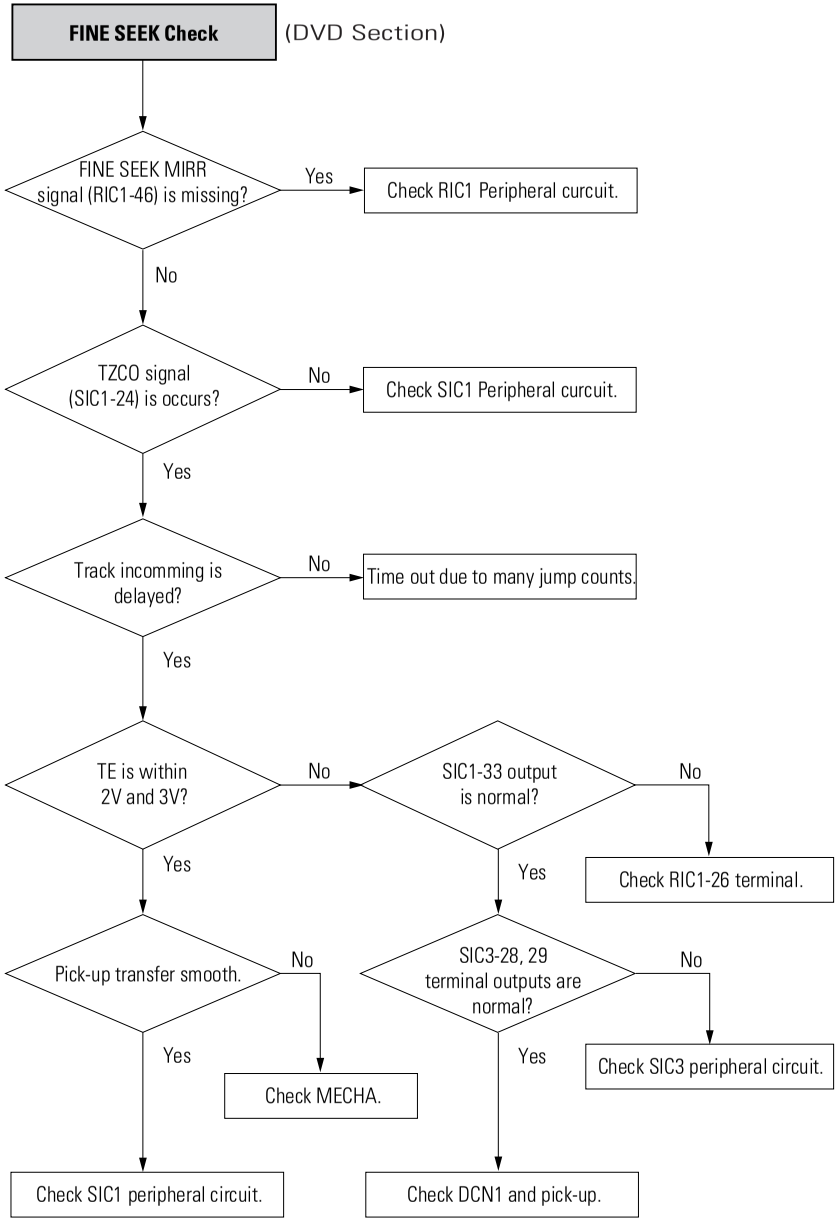

No Disc recognition
(DVD Section)
LD is outputted from object lens at play key input?
No
D
Yes
No focus incoming and no disc occurs.
C

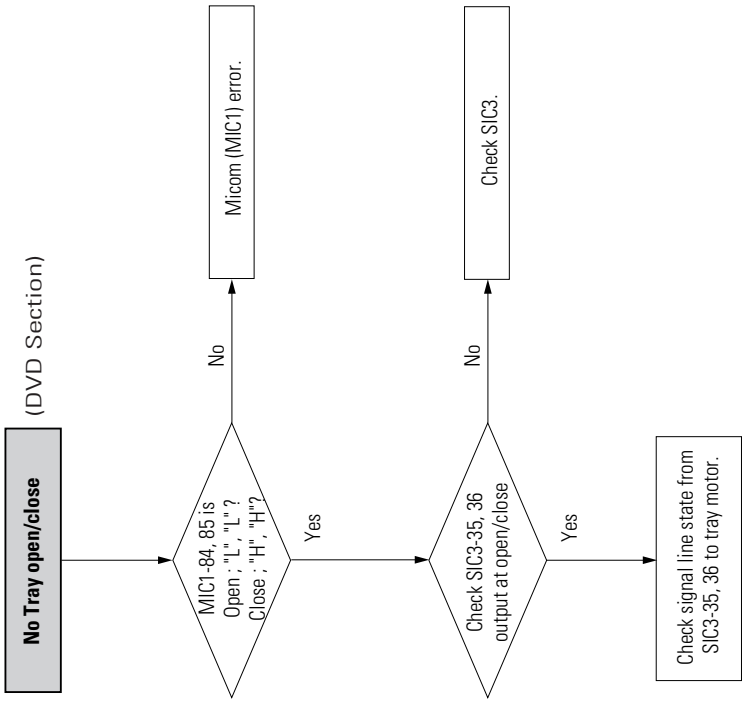

No focus incoming
(DVD Section)
C
FE in SIC1-25 is within specified range?
No
Check RIC1 and A, B, C, D input.
Yes
SIC3-1, 2 output are normal?
No
Check SIC3
Yes
Check open state from DRIC4 to pick-up.

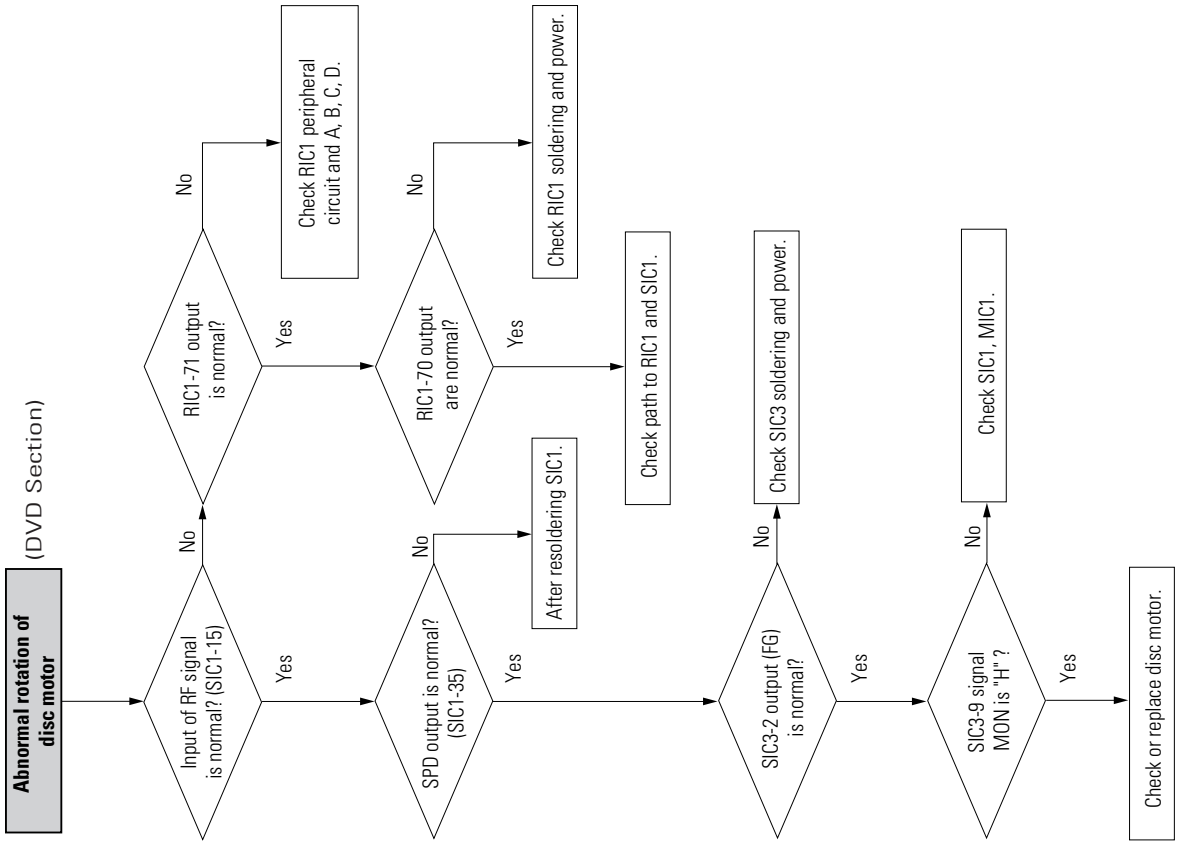

NO LD CD ON
(DVD Section)
D
RIC1-21 is 5V?
No
Check MIC1
Yes
Divide RQ1 emitter terminal voltage and 5V real voltage difference into 10ohm.
Yes
Current exceeds 0.1A?
No
Open check in related circuit.
Yes
LD out pick-up replace.

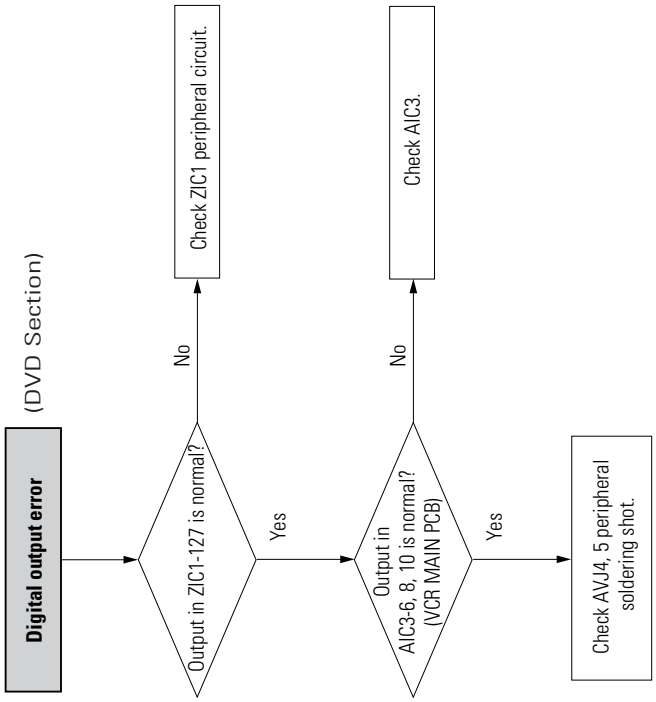

No pick-up home positing
(DVD Section)
SLD, SIC1-34 output is normal?
No
Check MIC1
Yes
LED+, SLED-SIC3-32, 33 output are normal?
No
Check SIC3
Yes
Check the Sled Motor and connection

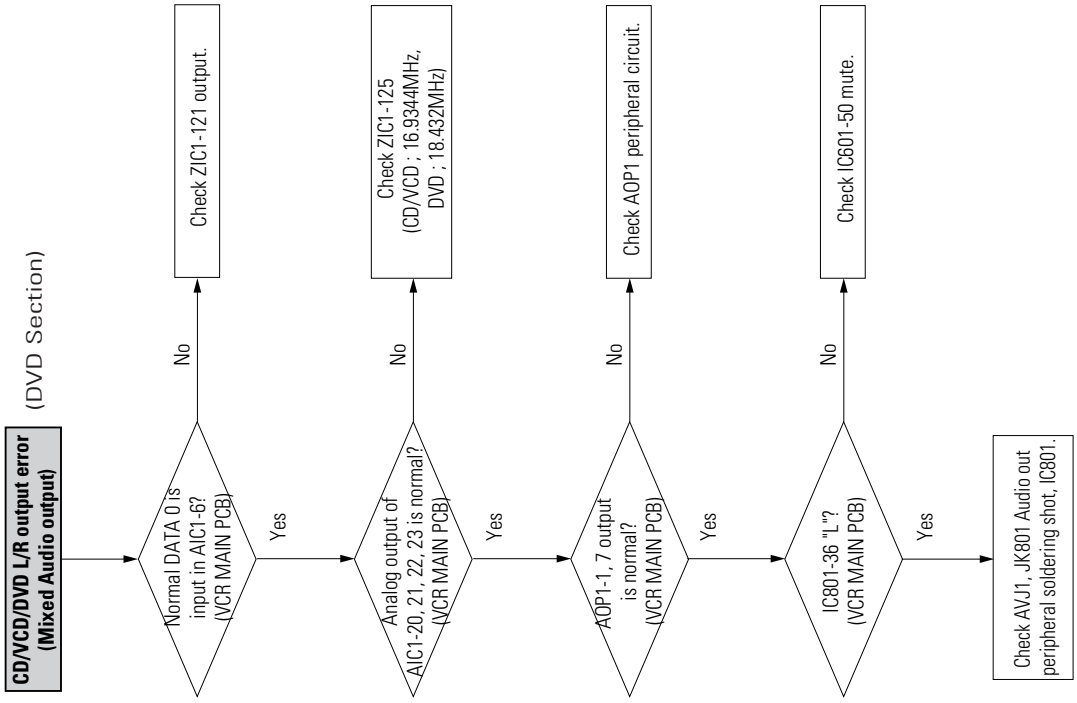

No Search Operation
(DVD Section)
MIRR, SIC1-157 output is normal?
No
RFAGCO, RIC1-72 output level is normal?
No
Check pick-up.
Yes
Check RIC1 peripheral circuit.
Yes
Actual velocity occurs at SIC1-34 terminal?
No
Check SIC1 peripheral circuit.
Yes
Actual velocity occurs at SIC4-32, 33 terminal?
No
Check SIC3 peripheral circuit.
Yes
TE occurs in search range?
No
Focus On?
No
C
Yes
See "Fine Seek Check"

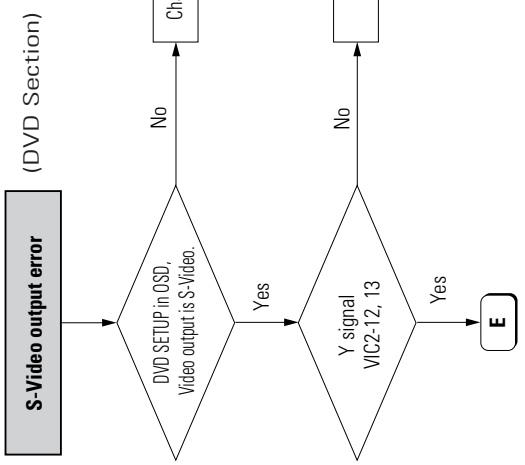

FINE SEEK Check
(DVD Section)
FINE SEEK MIRR signal (RIC1-46) is missing?
Yes
Check RIC1 Peripheral curcuit.
No
TZCO signal (SIC1-24) is occurs?
No
Check SIC1 Peripheral curcuit.
Yes
Track incomming is delayed?
No
Time out due to many jump counts.
Yes
TE is within 2V and 3V?
No
SIC1-33 output is normal?
No
Check RIC1-26 terminal.
Yes
Yes
Pick-up transfer smooth.
No
Check MECHA.
SIC3-28, 29 terminal outputs are normal?
No
Check SIC3 peripheral circuit.
Yes
Yes
Check SIC1 peripheral circuit.
Check DCN1 and pick-up.

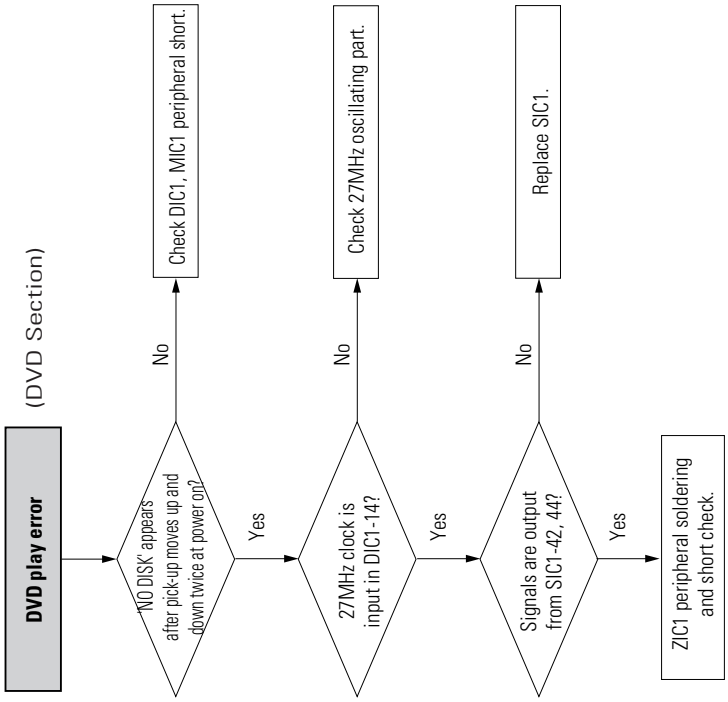

No Tray open/close
(DVD Section)
MIC1-84, 85 is
Open : "L", "L" ?
Close : "H", "H"?
No
Micom (MIC1) error.
Yes
Check SIC3-35, 36
output at open/close
No
Check SIC3.
Yes
Check signal line state from
SIC3-35, 36 to tray motor.

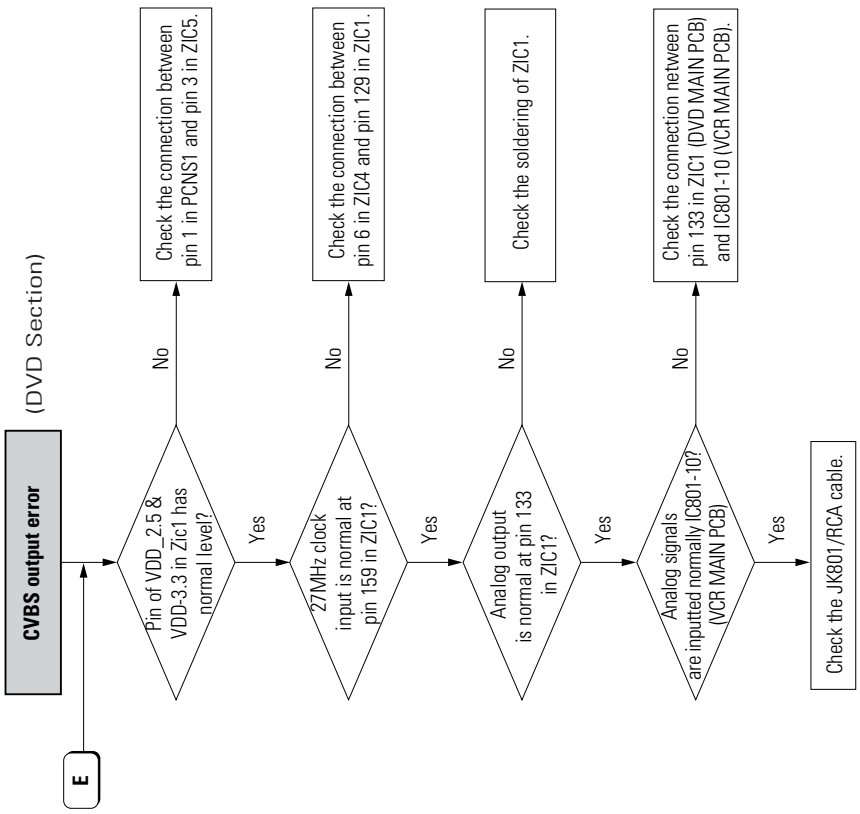

Abnormal rotation of
disc motor
(DVD Section)
Input of RF signal
is normal? (SIC1-15)
No
RIC1-71 output
is normal?
No
Check RIC1 peripheral
circuit and A, B, C, D.
Yes
RIC1-70 output
are normal?
No
Check RIC1 soldering and power.
Yes
Check path to RIC1 and SIC1.
SPD output is normal?
(SIC1-35)
No
After resoldering SIC1.
Yes
SIC3-2 output (FG)
is normal?
No
Check SIC3 soldering and power.
Yes
SIC3-9 signal
MON is "H" ?
No
Check SIC1, MIC1.
Yes
Check or replace disc motor.

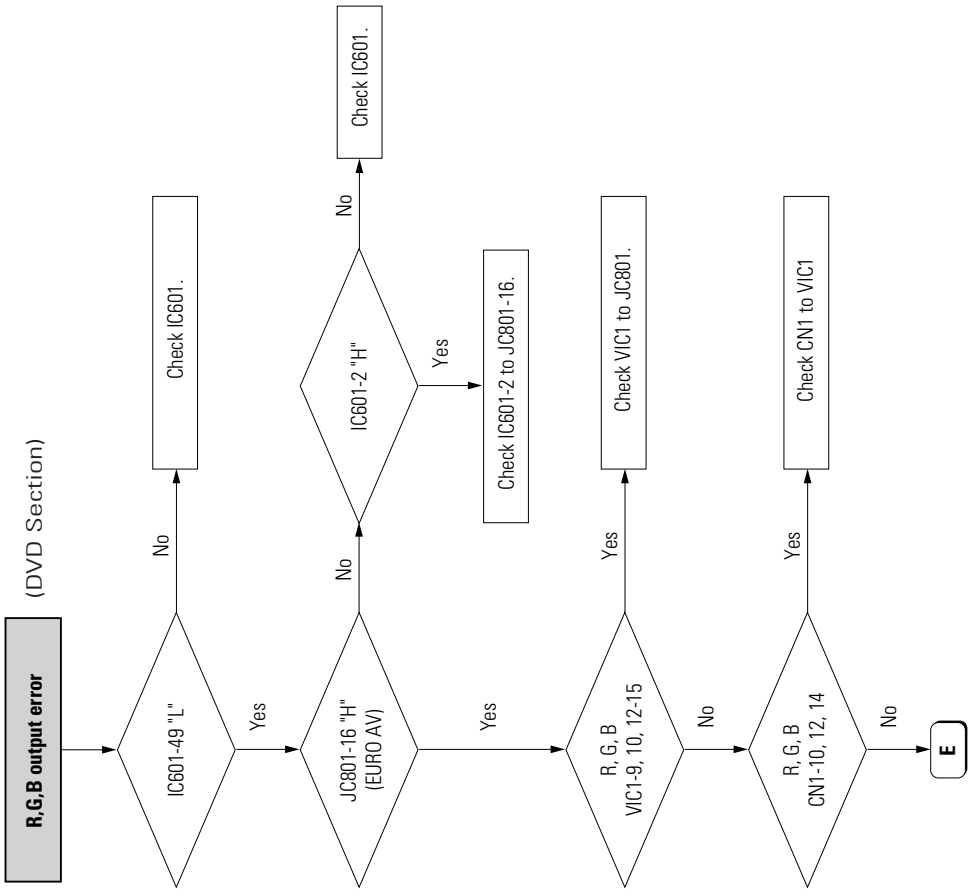

Digital output error
(DVD Section)
Output in ZIC1-127 is normal?
No
Check ZIC1 peripheral circuit.
Yes
Output in AIC3-6, 8, 10 is normal? (VCR MAIN PCB)
No
Check AIC3.
Yes
Check AVJ4, 5 peripheral soldering shot.


CD/VCD/DVD L/R output error (Mixed Audio output)
(DVD Section)
Normal DATA 0 is input in AIC1-6? (VCR MAIN PCB)
No
Check ZIC1-121 output.
Yes
Analog output of AIC1-20, 21, 22, 23 is normal? (VCR MAIN PCB)
No
Check ZIC1-125 (CD/VCD ; 16.9344MHz, DVD ; 18.432MHz)
Yes
AOP1-1, 7 output is normal? (VCR MAIN PCB)
No
Check AOP1 peripheral circuit.
Yes
IC801-36 "L"? (VCR MAIN PCB)
No
Check IC601-50 mute.
Yes
Check AVJ1, JK801 Audio out peripheral soldering shot, IC801.


S-Video output error
(DVD Section)
DVD SETUP in OSD, Video output is S-Video.
No
Change the video output S-Video.
Yes
Y signal VIC2-12, 13
No
Check VIC2.
Yes
E


DVD play error
(DVD Section)
'NO DISK' appears after pick-up moves up and down twice at power on?
No
Check DIC1, MIC1 peripheral short.
Yes
27MHz clock is input in DIC1-14?
No
Check 27MHz oscillating part.
Yes
Signals are output from SIC1-42, 44?
No
Replace SIC1.
Yes
ZIC1 peripheral soldering and short check.


CVBS output error
(DVD Section)
E
Pin of VDD_2.5 & VDD-3.3 in Zic1 has normal level?
No
Check the connection between pin 1 in PCNS1 and pin 3 in ZIC5.
Yes
27MHz clock input is normal at pin 159 in ZIC1?
No
Check the connection between pin 6 in ZIC4 and pin 129 in ZIC1.
Yes
Analog output is normal at pin 133 in ZIC1?
No
Check the soldering of ZIC1.
Yes
Analog signals are inputted normally IC801-10? (VCR MAIN PCB)
No
Check the connection netween pin 133 in ZIC1 (DVD MAIN PCB) and IC801-10 (VCR MAIN PCB).
Yes
Check the JK801/RCA cable.


R,G,B output error
(DVD Section)
IC601-49 "L"
No
Check IC601.
Yes
JC801-16 "H" (EURO AV)
No
IC601-2 "H"
No
Check IC601.
Yes
Check IC601-2 to JC801-16.
Yes
R, G, B VIC1-9, 10, 12-15
Yes
Check VIC1 to JC801.
No
R, G, B CN1-10, 12, 14
Yes
Check CN1 to VIC1
No
E

MEMO